3: Robequain--260 S-5 (no date) 1944 Laotians
116, 135, 316, 439, 471

"For the past several years the production of tin in the Nam Patène basin in Laos has exceeded that at Pia Ouac. The Nam Patène River is a left hand tributary of the Nam Hin Boun, which itself flows into the Mekong at Pak Hin Boun, north of Thakhek. Cassiterite has been mined here from time immemorial by the Laotians who dug small shafts a few meters deep into the alluvium. Native mining continues today on the European concessions, the ore being purchased by the companies. Formerly, after careful sorting, the richest particles were crushed, washed in cradles and reduced in Chinese charcoal-furnaces. But about 1920 production was still a mere ten to fifteen tons a year; it was exported to Thailand where it was used only as ballast for fish nets."

3: Robequain--262 S-5 (no date) 1944 Laotians
116, 135, 316, 439

"More or less argentiferous lead ores are found together with zinc ores in most beds, and it was these for which the Chinese sought particularly. French companies have attempted to reopen the mines, particularly that at Ngan Son south of Pia Ouac, but without success. The Compagnie Minière et Métallurgique de l'Indochine exports a few tons of lead ore and some tens of kilograms of silver, mere by-products of the company's zinc mining."

7: Thompson--374-375 J-4 (no date) 1937 Laotians
116, 439, 654

"When the French first occupied Laos, a number of investigations were undertaken to learn the country's commercial possibilities. The difficulties which the agents of the Commercial Syndicate encountered in the way of obstacles created by nature and by the Siamese, forced the government to grant it powers which gave a hybrid politico-commercial character to its activities. In spite of its semi-official support the Syndicate was doomed to failure, for a number of excellent reasons. [375] It was hampered by inadequate capital and knowledge of the country. Moreover, Upper Laos is an extremely unhealthy region, where even Asiatic merchants refused to go. The Syndicate's isolated efforts were concentrated on selling imports, which were more expensive than the Siamese and not so well adapted to the people's needs, and not on developing Laotian exports. The latter, to be sure, were food products, and hence very perishable. French industry simply did not produce articles essential to the Laotians, and what they sent to Laos was too high priced, not only as to original cost, but in heavy freight charges."

10: d'Orleans--264 [3] T-3 (1891-92) 1894 Laos
116, ~~459~~, 463

"As a rule, the inhabitants appear careless and idle; but probably they need not work to obtain a living, for commerce is the usual occupation in this district. I meet some merchants selling salt that has come from Hong Hay by Luang Prabang. The commodity is in small packets wrapped in banana leaves. Its price is agout one rupee for six pounds. In return they export chiefly rice and silk."

10: d'Orleans--319 [2] T-3 (1891-92) 1894 Laos
116, 439, 563 Chinese

"With regard to the few Chinese, they form a colony apart at Luang Prabang, devoting their energies to the trade in rice, salt and European fancy goods brought from Bangkok, no caravans from the Yunnam coming this far."

10: d'Orleans--322-325 T-3 (1891-92) 1894 Laos
116, 226, 228, 255, 439

[LSS: in Luang Prabang] "A good deal of net fishing goes on in the river itself, but it is not till later in the season that the prabeuc, a fish resembling the sturgeon, is caught. At fixed [pages 323 and 324 contain illustration] [325] periods, this fish ascends the river as far as the confluent of the Nam Ou, and its capture is a source of great profit for the inhabitants, as its eggs (which make excellent caviar when fresh) are sent as far as Xieng Mai, while the fish itself is canned and isinglass is obtained from its skin."

10: d'Orleans--326-329 T-3 (1891-92) 1894 Laos
116, 439, 443

[LSS: in Luang Prabang] "The shops and booths contain the various products of the country, such as articles of food, strong condiments, rice cakes, jam, and all that is required to make the quids of betel-nut, barks of red wood, native shirts, scarves, flowers for the pagodas, earthenware pans, iron implements, small pigs of lead (from Ban Lathane, one or two days' sail up the Mekong), and a variety of other local goods. In addition to these, there are the articles imported either [pages 327 and 328 contain illustration] [329] from the North or the South. From China come opium, musk, tea, vermicelli, and the felt carpets with a white pattern which are brought from Tali, and which I had seen before when travelling in Thibet; from Burmah green and red boxes of lacker work such as one sees in India; from Bangkok and Xieng Mai' European shoddy goods, muslins and stuffs, red silks with the mark, 'Manufactured in Lyons, France,' with calicoes sold for about sixpence a yard, imitation jewellery, sleeve links, garters, thread, needles, Japanese matches (sold for fourpence or fivepence per ten boxes), scribbling paper, condensed milk and a host of other articles, all either of English or of German make, the only French articles which I came across are a few bottles of ink and buttons."

10: d'Orleans--329 T-3 (1891-92) 1894 Laos
116, 439, 458, 563

[LSS: in Luang Prabang] "It is the Chinese who import and sell the goods from Siam or the Western Shan States, there being four traders in European articles. One of these is a French protégé, who tells me that he has brought his stock of goods from Bangkok by Pitchaï. When he goes down, he takes with him from Luang Prabang ivory, for which he pays about 5s. a pound, and benzoin which costs him about a rupee per lb. Last year, the price of these articles was very nearly double, and the trader tells me that a pair of fine stag's horns is worth about thirty rupees, a smaller pair fetching a third of that price. He adds that business is very bad, and that it is as much as he can do to make both ends meet."

10: d'Orleans--357 T-3 (1891-92) 1894 Laos
116, 137, 241, 439

"At the present time two vegetable products are exported from Luang Prabang, one being cardamome and the other benzoin, the latter having recently decreased 50 per cent. in value on the Bangkok market, doubtless because this perfume is now extracted from hippuric acid and other matters by chemical processes, while in time the flora of the country, which is very rich in other wild plants highly perfumed, will doubtless lend itself to fresh sources of industry.

In addition to the native products it will be easy to introduce fresh cultivations, such as the pepper tree, which already thrives in Annam, the vine, which grows wild on the plateau of the Poûon, and fruit trees of various kinds."

"Though the natural products of Luang Prabang are so varied, the cost of transport over so long a distance from the coast would reduce the profits very considerably, though I think that the complaints of the Chinese traders as to business being carried on at a loss must be an exaggeration, for if so why do they carry it on?

In any event, it is difficult to form a precise estimate of the commerce of the principality. According to the Siamese the exports from the Laos region, which includes the country between Strung Treng and Xiangsen in one direction, and Xieng Mai and Attopen in the other, amount to about £900,000, and if this estimate is correct the proportion of Luang Prabang must be very small. Macey gives the exports of benzoin at £40,000, but if this was so at one time the total must have decreased very much.

But trifling as the commercial movement of Luang Prabang may be, it is of interest to us, because of the situation of the town upon the Mekong, nearly in the centre of the Laos and in the vicinity of Tonkin, to see what share we may hope to have in it and what profit can be derived from it. Opinions vary very much upon the subject, and Mr. Archer, the British Consul, whose statistical reports as to the trade of this region are well worth careful study, is of opinion that there is little to fear from French competition, the cost of transport being too great, and with regard to steam navigation, he does not deem it possible upon the Mekong, on account of the rapids upon the other [359] hand. I have read several articles in the Bangkok Times to the effect that the French have great facilities for getting into their hands all trade upon the Mekong, and that to guard against this

Siam ought to push on the construction of railways with all speed. Then, again, Mr. Macey and Captain Devrez assert that the Tonkin routes are much shorter, easier, and less expensive than those leading to Bangkok.

Whatever the truth may be, of one thing I can speak positively, and that is that the greater part of the commercial current of Luang Prabang either comes from or goes to Bangkok. This current follows one of two routes. It either proceeds from Luang Prabang to Paklay by the Mekong; Paklay to Pitchai or Ontaradit by land and from thence to Bangkok down the Menam (this being the way by which we returned), a voyage of twenty-six days going down and fifty-two coming up. The second route is from Luang Prabang to Nong Kay by the Mekong; from Nong Kay to Korat and from Korat to Bangkok, this being rather the longer of the two. These routes, though shorter than that which brings Luang Prabang and Tonquin within a month of each other, have the advantage of being safer both by water and by land, there being no rapids on the Menam, while the roads are wide enough for elephants to travel easily along them and might easily have rails laid down. Owing to the facility of the communications, the cost of transport between Luang Prabang and Bangkok is if not cheaper, at all events not dearer than those via the Black River, and as I have been over the two routes myself I am in a [360] position to make the comparison. M. Massie, moreover, has arrived at the same conclusion."

10: d'Orleans--362-363 T-3 (1891-92) 1894 Laos
116, 276, 439, 655, 177.27 Siam
636.27

"... The opium monopoly has been set up in Luang Prabang by the Siamese. Not content with having, during the past century, ruined and depopulated the valley of the Mekong, and with weighing it down with taxation, they now seem anxious to crush its trade and arrest its growth. From our point of view, it is a matter of indifference to us if the relations between Luang Prabang and China become less close and friendly, and we may even turn this change to our profit, for the caravans which were wont to bring opium down the routes parallel with the Mekong, will find it answer [sic] their purpose to branch off in the direction of the Black River, and to effect their exchanges with Upper Tonkin.

I can answer for the fact that during the past year only one caravan reached Luang Prabang from the north, this consisting of sixty mules from Xieng [363] Hong, which took a month upon the journey by short stages, eight being loaded with iron, four with tea, and the rest with Chinese groceries, sugar, opium and a little silk."

23: Franck--350 T-2 (1924) 1926 Laotians
116, 439

"For centuries the Siamese and Chinese had most of the trade with Laos, which came and went by way of Siam; now the French are gradually diverting it, illustrating another of the advantages of protecting backward countries. No small amount of smuggling still goes on, especially in opium, and mainly engineered by the wily Chinese."

25: Brodrick--104 S-3 (1939) 1948 Laotians
116, 439

"A few miles after Pak-Hou is the mouth of the Nam Hou, from whose upper reaches and from the banks of its tributary, the Nam Pak, comes the finest and most prized benzoin in the world. This is the incense that is not much used in the Farthest East, but still is shipped down to Bangkok whence it reaches Europe as 'Siamese benzoin.' In the olden days, at least, the bulk of this precious perfume was sold into Russia for use in the ceremonies of the Orthodox Church. During the First World War, we British, as guardians of the blockade and as masters of the sea-route to the East, had to give a high priority to shipments of benzoin into Russia. And, of course, quasi-magical substances have ever been as potent as more immediately useful ones. What would the faithful have experienced in Old Russia had their nostrils suddenly been startled with the odour of frankincense or just the vulgar resin of the Norwegian Christmas tree? Probably the faithful have, in the last few years, got accustomed to substitutes, though I have been told that the Soviet Government still authorizes the import of Laotian benzoin."

26: Brodrick--60[5] S-3 (1939) 1944 Laotians
116, 439, 563

"What trade exists is in the hands of Shan and Chinese merchants who are also middlemen for the hill-rice and other products of the 'Khas' or 'savage' tribes of the jungle."

26: Brodrick--60-61 S-3 (1939) 1944 Laotians
116, 439

"The exports of the Laos country are interesting. It is one of the principal regions where benzoin is found (most of the so-called 'Siamese' benzoin was in reality Laotian, for in the olden days the Laotian trade moved down by Paklai and the Menam valley to Bangkok)--considerable quantities of beeswax, rubber, silk, sticklac, cutch, cardamoms, ebony, cinnamon, indigo, ivory, fish roes and rhinoceros and deer horns (for use in Chinese medicine) [61] come out of these strange hills and have done so for many centuries past-- Laotian products used to find their way to China through the Tongking highlands."

68: Mouhot--134-135 N-5 (1858-61) 1864 Laotians
116, 439, 314

"Little commerce is carried on in this part of Laos. [HD: i.e. in the territory between Loeui and Pak Lai] The Chinese inhabiting Siam do not come as far, owing to the enormous expense of transporting all their merchandise on elephants. Nearly every year a caravan arrives from Yunnan and Quangsee, composed of about [135] a hundred persons and several hundred mules. Some go to Kenne Thao, others to M. Nâne and Chieng Maï. They arrive in February, and leave in March or April.

The mulberry does not thrive in these mountains; but in some localities this tree is cultivated for the sake of furnishing food to a particular insect which lives upon its leaves, and from which is obtained the lague or Chinese varnish.

All the gum-benzoin which is sold at Bangkok comes from the northern extremity of the state of Louang Prabang, and from a district tributary both to Cochin China and Siam, and peopled rather by Tonquinites than Laotians."

68: Mouhot--276 N-5 (1858-61) 1864 Laotians
116, 439

"Want of means for the easy and advantageous removal of merchandise, causes Korat to be the central market for all the eastern part of the country. There they bring all the silk of Laos, langoutis, skins, horns, ivory, peacocks' tails, &c., which the active Chinese merchants sell again at a good profit at Bangkok, notwithstanding all the taxes they have to pay, having brought from thence cotton and other useful articles of Chinese and European manufacture for the use of the natives. Thus there passes daily through the forest of Dong Phya Phia, on the average, a caravan of from 100 to 150 oxen. With protective instead of restrictive laws, and an enlightened and civilized government, this commerce would increase threefold in a very short time."

663 Thais of the Menam, on the other hand, who were rid of the Cam-
175* bodians in the south but were pressed by the Burmese in the north, were
633 coming there in increasing numbers in search of gum lac and benzoin,
/439/ which they took back with them and sold to the Dutch navigators who had been sailing the waters of the Indian Ocean ever since the sixteenth century.

643* War against Ayuthya (1536). Phothisarath had just settled in
721 Vientiane when he received a visit from Ekaracha, the prince of
175* Ayuthya, who had been driven out and was being pursued by his relative the Phaya-Attit. He welcomed the fugitive and refused to give him up, and war was the result. The king of Ayuthya was halted at Muong-Khuk (1) by the Lan-Xang troops before he could even cross

1. On the right bank, a little way downstream from Vientiane.

the river and had to beat a retreat. He died when he reached home from a wound received in the course of the battle.

643* Relations with Annam. Phothisarath confirmed his peaceful in-
648* tentions with respect to the king of Annam. Relations between the
175* two peoples had become more frequent since their violent /75/ contact in 1479, and quite a few Annamites had remained in Lan-Xang after the retreat of Lê-Thanh-Tôn's troops. The two sovereigns exchanged presents and established neighborly relations between their States which were marked by a cordiality heretofore unknown, even before Lê-Loi and Lane-Kham-Dèng. This was true to such a degree that Lan-Xang became the refuge of the partisans of the Lê while the Mac usurpers held sway. One of these partisans, Nguyên-Câm, who was the ancestor of the present royal family, came to seek asylum there around 1530.

Succession of Xieng-Mai. In 1546 the throne of Lan-Na (Xieng-Mai) became vacant, and Phothisarath claimed the succession rights which he held through his mother, a princess of that kingdom. To establish his claim he sent the governor Sene-Si-Mun-Muong with a sizeable armed force which dispersed the local pretenders and rapidly overcame any hesitation on the part of the latters' partisans. The chief of the bonzes came in person to offer the crown of Lan-Na to the king of Lan-Xang, and the king accepted it in behalf of his eldest son,

175* inhabitants and especially the songs and laughter of the beautiful
114 girls bedecked with flowers. . . . It nevertheless follows from his re-
/771 marks that Lan-Xang was then the veritable holy land of Buddhism
792/ and that it possessed the most highly venerated sanctuaries where priests from Siam and Cambodia "came to spend ten or twelve days to study and receive their grades."

● 439 For a long time now the rich traders of Holland had been sending
175* ships into the waters of the Indian Ocean in search of cloves, /106/ nutmeg, pepper, silk goods, gold dust and porcelain. In 1641 the mother country had made settlements in Java, Sumatra, Borneo, the Celebes and the Moluccas, and its flag was known as far as the seas of China and Japan. Several mercantile establishments had sent out "sub-traders" from Batavia to Siam and to Cambodia. In July 1641 the governor general of Java, Van Diemen, ordered a mission which was operating in Pnom-Penh on behalf of the East India Company to send out a caravan to "the land of gum lac and benzoin." Under the direction of Van Wustof and his assistants William de Gover and Hubert Boudewinsz, the caravan entered the Mekong. The voyage was a long and difficult one, and often dangerous where rapids had to be passed. These men left Phom-Penh on July 20 and reached Vientiane on November 3 after 106 days of effort. They brought a good-sized packet of cloth and cottonstuffs, a casket of emeralds set in rings and small gifts such as brightly colored sampots (?), mirrors which closed like a book, etc... (1).

1. Cf. Cabaton, Le Laos et les Neerlandais au dix-septieme siecle (1913).

A few kilometers out of Vientiane a /107/ messenger from the king came to find out what the foreigners' intentions were and was shown a letter from Van Diemen to the "sovereign of Laos." He was fully satisfied and took them to the outskirts of the city to dwellings which had been prepared for them on the banks of the river. On the following day, November 4, the merchandise and gifts were unloaded. On the 5th the Dutch were received by the king "a quarter of an hour's
/576/ march away from the capital." They knelt down most humbly, their feet bare, striking the ground three times with their foreheads and holding a large candle in each hand, and were welcomed in a tumultuous camp of soldiers, horses and elephants caparisoned with

gilt and jewels. The wily merchants accepted all these kindnesses 439
in the hope of extracting great profits from their packet (1). 175*

1. Cf. Cabaton, op. cit. /Le Laos et les Neerlandais au dix-septieme siecle (1913). /

The audience took place near the pyramid of That-Luong which was entirely covered with gold plate. The king, surrounded by all his court, stood in a great temple and had the newcomers sit on mats under the gallery. The following day danses, combats and /574/ water jousts were given in their honor on the river bank. Souligna-Vongsa was present, carried on a golden chair, and came and sat on a /108/ balcony erected over the river. In the evening more than two hundred fiery pirogues went down the Mekong. "The river seemed to be on fire."

As time passed the merchandise sold well, thanks to the gifts distributed to the king, the princes, the princesses and the officers. The Dutch cleverly disparaged the Siamese of Ayuthya as traders of little faith, offered to settle a misunderstanding which had arisen between the sovereigns of Lan-Xang and Cambodia, and obtained the Laotians' promise to deliver them enormous quantities of benzoin and gum lac. They finally left on December 24, "profoundly impressed with the wealth and splendor" of the kingdom of Vientiane (1).

1. Van Wusthof left without his two assistants, whom he left with the king to await the gifts destined for Van Diemen and the Laotian "ambassador" who was to accompany them. (Francis Garnier, Bulletin de la Societe de geographie, 1871.)

If we are to believe Van Wusthof, this city then had a huge 174
population, while Luang-Prabang was nothing more than a deserted 164
city. A terrible cholera epidemic had decimated its population, 369
and those who were left had come to life in Vientiane.

He also confirms the kingdom's frontiers as stated by the Annals and the perfect relations which /109/ Lan-Xang maintained with all its neighbors.

On the other hand he does not shed any light -- rather the con- 439
trary -- on the obscure period which preceded Souligna's accession 643*
to the throne. Indeed he writes with perfect serenity: "the present 175*
king inherited the crown three years ago from his brother, who died

439 after a ten year reign without leaving any sons." He thus explicitly
643* contradicts the native documents which recount the many competitions
175* for the throne which had divided the royal family, and according to which the "present king" succeeded his uncle (Visai).

He adds that the government of the country was divided, under the
175* high authority of the king, between three great officials:
642
645 1. The head of the army who was "governor of the province which produces benzoin" and commander of the city of Vientiane. He doubtless refers to the prime minister Tian-Thala, the son-in-law of Souligna whom he calls Tevinia-Assen;

2. The governor of Nakhone or viceroy, who commanded the whole southern part of the kingdom, including Attopeu, as far as the Cambodian frontier. This was the Nan-Tharath of the Annals, whom he calls Lachaen;

3. The minister of the Palace who is in charge of relations with ambassadors.

These three high officials "were given /110/ an audience only every two or three months, unless there were some necessity or the king had them summoned expressly."

/693/ Next to the king there was a "tribunal in charge of civil and criminal affairs" which was composed of five of his relatives who had daily access to the sovereign.

/651 Finally, Van Wusthof estimates the king's income at "two piculs"
643/* per year of gum lac, benzoin and gold (1).

1. Cf. Georges Maspero, op. cit. /Un empire colonial francais: l'Indochine. Paris, 1929-1930./ A picul was equal to 61 kilograms.

175* The Account of Father Marini (1666). This evocation of the
114 Laotian kingdom in the seventeenth century does not differ appreciably, on the whole, from two travel accounts published in Italian at about the same time by the Jesuit fathers Martini (quoted p. 104, note 2) and Marini. A translation of the latter's accounts was placed on sale in Paris in 1666 (2). No matter how picturesque it may be in its

/127/ 2. Relation nouvelle et curieuse des royaumes de Tonquin et de Laos, traduite de l'italien du P. Marini Romain, par L.P.L.C.C. (F. Lecomte; cel.), a Paris, chez Gervais Clouzier, au Palais, sur les degres, en montant pour aller a

648 an administrator. "Whence did this gigantic river come? What
175 regions did it water? To what peoples did it give access?... France
654 owed it to science and to its own interest to try in its turn to pierce the thick veil which had stretched over Indo-China for so long a time" (3).

3. Cf. P. Legendre, Nos gloires coloniales.

In 1866 Admiral de La Grandiere decided "to send out a mission to explore the course of the Mekong over as long a distance as possible /232/ from its mouth." It was placed under the command of Doudart de Lagree, who chose as his companions Francis Garnier, Ensign de Laporte, the naval doctors Thorel and Joubert and the young embassy attache de Carne.

The expedition left Saigon on June 5, 1866 on gunboats Nos. 32 and 37, visited the ruins of Angkor, went upriver as far as Kratie and then continued in pirogues. On September 10 it reached Bassac and after a thousand and one difficulties in the rapids of Kemmarat passed by Nong-Khay (1), an important trading center

1. Nong-Khay, built on the right bank some forty kilometers
● /439/ (by the river) downstream from Vientiane, controlled the greater part of the traffic from Upper Laos -- benzoin, cardamom, salt, tobacco, pelts and lac. It is still an active market today, and is joined to Vientiane by a highway frequented by numerous trucks.

created by the Siamese to replace Vientiane, the impressive ruins of which the expedition saw, swallowed up as they were by the vegetation. It finally reached Luang-Prabang on April 20, 1867.

The explorers did not remain there for any length of time. After erecting Mouhot's mausoleum and exploring the region they decided to entrust all the instruments which were no longer absolutely indispensable to them, as well as their maps and their botanical and geological collections, to /233/ King Tiantha-Koumane who sent them to Saigon "with scrupulous fidelity." Then they set out again, "escorted by a throng of functionaries and of young women who cried for some kind of souvenir of their guests. Uniform buttons and the smallest galloons were given to them" (1).

1. Cf. P. Legendre, op. cit. /Nos gloires coloniales/

648* edition), Paris, 1911./, p. 9.
175*

654 the name French Syndicate of Upper Laos, which placed a first ship-
/439/ ment of fifteen tons of merchandise at the expedition's disposal.

Pavie set sail again on November 17 for /293/ Bangkok, where he stayed for only two weeks, just long enough to make contact again with our representative in Siam and to reopen negotiations with the Siamese foreign minister, who was specially appointed for the purpose by King Chulalongkorn.

On January 23, 1890 he reached Hanoi and rejoined his old and his new companions (including, among the latter, the embassy attache Lefevre-Pontalis, the vice-consul Lugan, the trader Macey, Professor Counillon, the Postal Commissioner de Coulgeans, the naturalist Le Dantec and the officers Riviere, Friquegnon, de Malglaive, Dugast and Cogniard). He divided them into several groups of operators who scattered on February 3 throughout Tran-Ninh, Cammon and the region of Stung-Treng, while he himself set out for Luang-Prabang with a last group of "fervent disciples," where he arranged to meet all the members of the mission six months later so that they could coordinate their first labors over the winter months.

Duly provided, through the intermediary of Governor General Piquet, with the authority of the king of Cambodia and that of the emperor of Annam for settling questions of frontier delimitation, and with a passport from the Chinese government /294/ which would eventually allow him to explore the Yunnanese frontiers, he first
/624/ went to Muong-Lai where Deo-van-Tri was waiting for him. Faithful to his promise, now that all his brothers had all been freed Cam-Sinh's son awaited his arrival so that he could offer himself to the French authorities, "placing all his pride in giving himself up to that man who had restored calm to his land" (1).

1. Cf. Mission Pavie, "Geographie et Voyages," Vol. II, p. 12.

Pavie had an enchanted voyage. Although the magnificent valley of the Black River no longer held for him the powerful attraction of the unknown, still he felt a profound joy as he daily noted the changes for the better which had occurred since his last trip among
/727/ these peoples. "The influence of Pennequin (who had accompanied
/178/ him with Vacle and Lefevre-Pontalis) was there, clearly marked at each step... no more Flags in the well-known colors, all had

Question of the Sip-Song-Panas (Anglo-French commission, January-April 1895). On January 1, 1895 he met the British mission in Muong-Sing, as he had agreed with its leader, the Resident Minister Scott, during his recent trip to Bangkok. 648* 175*

Because he had explored them in 1891 with Deo-Van-Tri, Pavie was not ignorant of the fact that the twelve principalities which lay in a line on both banks of the river and which formed what was called /332/ the confederation of the Sip-Song-Panas had always been more or less tributary to Burma, but he also knew that the British conquest of this latter country had detached several princes from it and that these princes had deemed it well to place themselves under Chinese protection. The prince of Xieng-Kheng, in particular, who was a descendant of the old "Chao-Fa" of Muong-Sing and was established on the right bank at Muong-You (1), had transferred his

1. See above, p. 176, note 1.

capital to the plain of Muong-Sing in 1885 "in order to put the Mekong between himself and the invaders." This prince, who was "a sage /563/ and perspicacious old man, a scholar whose speech was rich in /439/ images, and a man greatly superior to the average mandarin," was endeavoring to create harmony among the extremely varied populations with different origins, customs and languages -- Lues, Younes, Yaos, Meos, Mousseux, Khas, etc., who had settled on this verdant plateau, an age-old crossroads on the great caravan route. With his profound good sense he was the first to realize that it was impossible to create an intermediate zone "and that a partitioning of the country was the probable solution. He gradually came to accept the idea of giving up the right bank and, yielding to his liking for us, he even made /333/ preparations to emigrate towards Luang-Prabang (1) in

1. See above the relations of Luang-Prabang with the Sip-Song-Panas in the seventeenth and eighteenth centuries, pp. 129, 133, 180 ff.

case no part of his country should be awarded to us by the terms of the decision" (2).

2. Mission Pavie, "Geographie et Voyages," Vol. II, p. 341.

642 Indo-Chinese Federation.

The commercial agencies on the right bank, whose number had
439 reached ten, were fully functioning in 1895, but the duties of their
655 directors had been so ill defined /340/ /Page 340 is devoted to a map: "Laos in the Indo-Chinese Federation."--Translator/ /341/ that these posts did not render any real service. No one dared to suppress them officially, however, for fear that Bangkok's agents
/648/* might find an argument in such suppression for aggravating still further their maneuvers among the populace of the restricted zone. France was content merely with removing the directors and placing control of the agencies in the hands of the nearest government commissioners.

Further Franco-Siamese negotiations. Indeed, the Siamese governors did not cease to act in contravention of the provisions of the agreement appended to the treaty of 1893. They particularly endeavored, by intimidation, to prevent the former inhabitants of the left bank who had been transferred to or detained on the right bank from leaving the restricted zone and having recourse to the French agents for help. In Bangkok itself the trial of the Pra Yott had resulted in an acquittal, and an appeal by Attorney General Ducos (1), who was sent to Siam specially to draw up the indictment,

1. Attorney General in Hanoi. Later he was lieutenant-governor of Cochinchina (1896-1897) and superior resident in Cambodia (1897-1901).

and the formation of a mixed tribunal had been needed to obtain conviction of the guilty party. As for the incident /342/ of Tong-Xieng-Kham, criminal proceedings in the case were always suspended! Yet in the course of a voyage to Europe King Chulalongkorn had had a long conversation in Paris in 1897 about the consequences of the treaty with Foreign Minister Hanotaux, to whom he had given the most reassuring promises. In 1899 Governor General Doumer had returned this visit in Bangkok and, by the terms of the extremely cordial talks which he had with the chief officials, he had believed as he left Siam that a final agreement was imminent. All these courteous gestures, however, had not been followed by any change in the attitude of the Siamese agents on the Mekong, and Minister Defrance continued to formulate constant claims...

Thus the agreement of July 14, 1870, regulated fishing conditions on the Great Lake [Grand Lac] (3). In 1882 it was decided to set up

(3) See Appendix III.

a telegraph line between Bangkok and Pnom-Penh (4). And finally,

(4) See Appendix IV.

on May 23, 1883, an agreement was reached which regulated the commerce and sale of French wines and spirits in Siam (5).

(5) See Appendix V.

This fine state of affairs soon took a turn for the worse at the time of the Tonkin expedition.

The agents of Great Britain in Siam were afraid that our penetration into the valley of the Red River and into Upper Laos [5] [Illustration] [6] [Blank page] [7] would hinder British plans for commercial establishments in Yunnan and would prevent British predominance in the two Kouang. Since they were bent on preserving their influence in this region, they induced the Siamese sovereign to act first on the Chinese frontiers, where he was to bar our progress, and then in Laos with Annam as the objective, in the hope that he might create difficulties for us and perhaps succeed in concluding some form of alliance against us.

The king's pride was flattered by his foreign advisers. Feeling that he was to play the part of the sovereign of a "great nation," he abandoned his prudent reserve, no longer kept the balance equal between the rival nations, and began his adventurous course. These were his first steps towards great disappointments, and also towards territorial losses such as those resulting from the treaty of 1893 and the London convention of 1896.

Circumstances at the time, moreover, seemed to favor Siam's action and even to excuse its behavior in some measure.

The invasion of Laos by the Hos (1) enabled the sovereign of

(1) Chinese bandits from Yunnan.

Colonial 175 654 433 439

commercial and industrial mission was attached to the former, and it was to study the question of means of communication by land and river, to create trading posts, to collect samples, to examine the commercial methods in use and to determine the nature and value of the products of the Mékong basin. Funds for this mission, which left France with an initial stock of fifteen tons of various kinds of merchandise, were provided by a syndicate which had just been formed, with an initial capital of 100,000 francs, under the name of French Syndicate [12] of Upper Laos. It included representatives of Parisian trade and industry who had united for the experiment thanks to the initiative of M. Léon Tharel, the president of the group.

All throughout 1890 and 1891 the missions fulfilled their tasks with ardor, not without constant struggle against the implicit hostility of the Siamese, which although occasionally concealed under an [Illustration here] affable outward mask nonetheless continued to manifest itself and created obstacles everywhere in the hope of discouraging the valiant explorers and causing their work to fail.

In spite of the difficulties which they encountered, the two missions were successful in their delicate enterprise and the results of the latter were most significant. From that point on we were in possession of precise information concerning the whole region extending from Yunnan to Cambodia.

175 609 654

What was more, by continuing the tradition begun by Mouhot, the [13] Lagrée mission, Harmand, Néis, etc. we had made contact with the Laotian people and made them know and love the French name. In us they saluted their future liberators and the ones who would come to free them from the brutal and detested Siamese yoke.

Finally--a fact of no less importance--thanks to the activities of the commercial mission, to the trading posts which it had established and to the contacts and arrangements which it had prepared, we were in possession from that time on of private commercial interests in the Mékong basin. Thus greater force was given to the rights which we already had to intervene in Laos against Siamese intrigues in the name of our protégés, the emperor of Annam and the king of Cambodia.

648 175

Frightened and surprised by the results which France had achieved in so short a time in the Mékong valley, despite the ambushes which it had laid on all sides and the hostile maneuvers which it had supported, Siam began to fear that France might invade its Laotian territories. It then invoked the friendship of Great Britain and

648 surrounded itself with official advisers from that nations.

175 In a short time, and with remarkable rapidity, it organized an army and navy which were trained and commanded by European officers. It reinforced all its detachments in Laos, levied additional troops, and after providing supplies of arms and munitions it constructed forts. In a word, it prepared for war. It announced to the people that all these steps had been taken in order to "drive out the French and extend the Thai kingdom into Annam."

726 The 1889 arrangement establishing a status quo was then violated
175 Siamese troops and commissioners advanced towards the Annamitic Chain and crossed it at several points, particularly at Hatraf and Ai-Lao, and thus reached a point only forty kilometers from Hué. In the course of their forward march various incidents occurred which obliged the French Government to abandon the reserve which it had heretofore maintained when confronted with the intrigues of the court of Bangkok. At last it made ready to act vigorously.

175 In January 1892 the greater number of the members of [14]
648 the Pavie mission had returned to France. Only three of them had remained in Laos, two in Luang-Prabang and one in Stung-Treng.

439 It was at this time that the French Syndicate of Upper Laos, which had become the French Syndicate of Laos and had doubled its capital, sent out a new six-man mission as well as a large stock of merchandise. Its purpose was to reoccupy the old trading posts in Luang-Prabang and Nong-Khay and to found new ones at Bassac, Outhène and Xieng-Hong in a line along the Mékong. Its activity would thus extend from Cambodia to Yunnan. The Syndicate's new mission was to support and strengthen the commercial interests already in existence in the Mékong basin. It also placed vigilant agents in all the posts who would be able to keep an eye on the maneuvers of the Siamese and instil confidence in the people by showing them that in spite of Siam's threats and warlike preparations we should not abandon them. The Laotians were thus conscious of our support at a time when their invaders were becoming harsher and more arrogant and were threatening to extract reprisals from them as a punishment for having placed their trust in us and solicited our protection.

In these critical circumstances the Government decided to place a consul general in Bangkok so as to render France's political action in Siam more effective. It chose M. Pavie to occupy this high post.

both for his special knowledge of the country and the questions at issue and as a reward for the exceptional service which he had rendered to France in the course of his previous missions. Shortly thereafter, so as to place our chief agent in Siam on the same level as those of other nations, the title of Resident Minister of France was conferred on him.

At the same time, in order to extend our activity in the Mékong basin, the Government discontinued the vice-consulate in Luang-prabang, which had always remained without Siam's "exequatur", and replaced it with a commercial agency. Three other agencies of the same type were established in Outhène, Bassac and Stung-Treng.

The first three of these posts were managed by the agents, [15] [Illustration] [16] [Blank page] [Unpaged map inserted between pp. 16 and 17] [17] who were heads of trading posts in the French Syndicate, and the last was managed by a chief clerk in the Posts and Telegraphs. They were given the title of commercial agents of the Government and, even while they continued to carry on commercial operations, they received salaries from the Colonies budget. They corresponded directly with the Governor General of Indo-China and the Resident Minister in Bangkok, to whom they sent telegrams and official reports.

Meanwhile the Siamese, thinking that they were to be permitted to do anything and secretly impelled by the British agents, continued to advance eastward terrorizing the people and mistreating our subjects, protégés and nationals in Siam as well as in Laos and in Cambodia, in the region of Great Lake [Grand Lac].

Their audacity reached its climax in a serious offense to our flag in Tong-Kieng-Kham, and the accumulation of all these grievances drove the French Government to vigorous action. Following an interruption and a patriotic speech by M. Deloncle, a deputy, the Chamber decided to safeguard the rights of our protégés and to recall Siam to respect for the treaties and arrangements which had been agreed on. The following are the terms in which M. Deloncle placed the question before Parliament on February 4, 1893.

[C. A. M. Translator's note. The following speech (through p. 17, line 5 in this translation) is presumably taken from French legislative records. It is set in small, contrasting type in the source.]

[114] of what has been observed, and because no better expression of the facts could be hoped for.

THE THAI RACE

142 "Laotians. Of all the Thais, the Laotian is the one who has
144 remained the purest, although he has a much higher proportion of Aryan blood than the other varieties, with the exception of the Lus. Fairly tall in stature, his hair cut short, elegant in his movements and more refined than all the other inhabitants of the land, he is the aristocratic type of Laos. His upbringing, his education, his religion and even his vices have a mark of distinction which make
438 them stand out above those of his neighbors. An excellent boatman,
505 and a trader rather than a farmer, he is the one who seems the master of the land, as much by virtue of his commercial aptitudes as by the
484 ease with which he ranges the country. Mounted on his long and narrow shaped pirogue, made in one piece of a tree trunk hollowed out by fire, he goes great distances to visit peoples of the most varied races [175] [Illustration] [176] [Blank page] [177] and serves as a link between all the human varieties which populate Laos. He is at home and at his ease everywhere, standing out clearly above all his countrymen in this respect.

[361] "The Laotian prefers to settle along navigable watercourses and in proximity to plains of ricefields. He is glad to have his land
[241] worked by mercenaries or by dependents of inferior race, and some-
[567] times by slaves (at least before our arrival). He himself, with quite an extensive knowledge of the needs and resources of the other inhabitants of the land, particularly likes to traffic in all kinds of merchandise. He it is who goes to buy forest products and cereal grains on the spot from the mountainfolk or from sedentary farmers, and sells them cloth, salt, tobacco, earthenware, farming implements
[439] etc. in exchange. He it is who exports the products of Laos to neighboring countries and brings back the things which Laotian industry cannot produce. His business as a commercial traveler, which he likes and which gives him a good standard of living, occupies him for only a few months of the year but brings him into contact with all the neighboring peoples and also with the Europeans and Chinese in the Siamese, Annamite and Cochinchinese trading posts. Thence arises his veneer of civilization which strikes one at first glance.

101 [261] [Illustration] [262] [Blank page] [263] As far as marriages, deaths, etc. go, we find practically the same customs among the Kha tribes of southern Laos as among their fellows in northern Laos.

231 It should be noted that the Rades breed a variety of small horses •439 which are highly prized in Annam, Laos and Siam.

"These Khas love music and dancing. Their favorite instruments [533] are gongs and bells.

"A set of gongs consists of seven, nine or twelve single ones. 534 Made of copper and often very beautiful, these gongs take the shape of a cylinder from forty to eighty centimeters in diameter, only one end of which is closed by a vibrating plate. The cap worn by our judges and professors, although on a smaller scale, gives a fairly clear idea of the shape of these instruments. A few of the instruments are artfully cast and ornamented with much elegance. There is a solid ring about a third of the way along the gong's length which is part and parcel with the rest of the gong and makes it possible to hang it up on a side of the house, at about the height of a man's head, by means of a rattan thong fastened to the frame.

"The performers stand facing the battery and pummel it with their fists, taking care to strike the vibrating plate in the center so that it will emit a true tone. This procedure produces perfect musical notes, which are accompanied by the dull resonances of the tom-toms and the sharp sonorities of the bells made of a copper and tin alloy. The gongs bring a high price, and when it is a fine one a complete series is worth from 1,200 to 1,500 francs.

"In some villages the performers each take an instrument and hold it in a sling fastened to their shoulder, then form a column in single file. This Indian-style procession marches from the center of the house towards one of its extremities, striking more and more gently as it moves away from its point of departure. Then it returns to the center, unleashing a compensating crescendo. The maneuver begins again towards the other end of the house, and the musical promenade continues until the musicians are exhausted.

535 "When the Khas begin to play and perform the Kimlang (a very 272 stirring war dance) and the warriors grow excited from dancing and 579 from drinking rice wine, it is wise to make them stop as soon as they begin to pick up their weapons, for when drunk with alcohol and enflamed with ardor they are no longer masters of themselves.

714 "War dress includes feathers in the hair and a sort of cross of Saint Andrew formed of cloth rolled and crossed on the chest. Weapons, quivers, arrows, crossbows, bucklers, spears and swords complete their equipment.

Finally, the Ao-Tchaine Yaos owe their name (bearing sapeks) to the fact that the men's jacket, which is shorter than that of the other Yaos, is ornamented in front with several rows of flat copper or silver buttons which resemble sapeks (Annamite and Chinese coins).

The women fasten a pad of compact, gummed hair on their coil by means of sticks made of ivory, of bone or simply of wood.

Like the Meos, the Yaos inhabit the peaks of mountains in northern Laos where they grow poppies. They are confirmed opium smokers.

[270] [Blank page] [271] [Illustration at top]

CHAPTER V

1. ORGANIZATION

Consulate and Commercial Agencies. Before the treaty of October 3, 1893, we already had a consul at Luang-Prabang in the Mekong basin, on the right bank of the river. In 1892 the vice-consulate was closed and commercial agencies were set up at Luang-Prabang, Outhene and Bassac on the right bank, and then at Stung-Treng on the left bank. The first three agencies were directed by representatives of the French Syndicate of Laos, and the last by a clerk of Posts and Telegraphs. The commercial agents performed the functions of consular agents. Later on in 1894 and 1895 when we actually took possession of Laos, that is to say of the territory on the left bank of the Mekong, two additional agencies were established at Xieng-Khong and Xieng-Sen. [272] Then in 1895 the agencies of Pak-Lay, Xieng-Khan, Nong-Khay, Lakhone, Ban-Mouk-Dahan and Kemmarat were created on the right bank, bringing the total number to ten, for those of Stung-Treng and Luang-Prabang had been raised to the status of commissionerships.

These new agencies were directed by "commercial agents" specially appointed for the purpose. In addition to the delegates of the French Syndicate of Laos who continued to hold office, these agents included a few inspectors of the Tonkin native guard.

The duties of these officials were poorly defined, and their chief role was to assert our presence. They were mere information agents. For this reason official circles soon decided to abolish these posts, an action made possible chiefly by the establishment of two new vice-consulates in Siam, one at Oubone and one at Ban-Dua-Makeng.

648 "However, since it did not appear advisable to sanction the abandon-
• 439 ment of the commercial agencies by an official act, which might
175 have been regarded by the Laotian people and by the Court of Bangkok as a modification of the policy followed in the Mekong valley by the French Government," the positions were not discontinued, but only the officials who had held them.

It is thus that today the ten commercial agencies are directed by the administrators of neighboring provinces or by chief clerks or chief guards who perform the functions of commercial agents.

631 Temporary organization. Government com-
175 missionerships. Missions. As soon as the terms of the Franco-Siamese treaty of October 3, 1893, became known, various missions originating in Annam and Cochinchina were sent to Laos to reconnoiter, and set up a temporary organization for the territories on the left bank of the Mekong to which Siam had abandoned its claims.

In Upper Laos our agents, who were already established on the right bank at Luang-Prabang, took possession of the territory bearing this name. Then in the course of the first half of 1894, when the government commissioner M. Vacle had arrived, they settled in the former Annamite phus of Tran-Bienh and Tran-Ninh and in the territory of [Map, unpaged, inserted here] [273] Vien-Tiane. Somewhat later the assistant commissioner of the French Republic in Laos (1) and

(1) The general commissioner of the French Republic in Laos, M. Pavie, was the chief of two frontier delimitation missions which operated in the basin of the Red River, the Black River and the Mekong. His assistant commissioner was M. Lefèvre-Pontalis.

one of our former commercial agents in Luang-Prabang went to reconnoiter and organize the territories of Xieng-Khong (left bank), Poukha and Muong-Sing (2).

(2) A newly appointed government commissioner went out to take possession of the territory of the two Muong-Hou and settled at Muong-Ha-Hine to await the impending delimitation of the territory.

In middle Laos, two administrative agents delegated by the

149: Reinach--218 G-3 (no date) 1901 AM1 Indochina
Laotians AM8

[301] COMMERCIAL AGENCIES
(on the right bank of the Mekong)

439.

1. Xieng-Khong and Xieng-Sene (residence at Xieng-Khong).
2. Pak-Lay and Xieng-Khan (residence at Pak-Lay).
3. Nong-Khay (residence at Vien-Tiane).
4. Outhene (residence at Pak-Hin-Boun).
5. Lakhone.
6. Ban-Mouk-Dahan, Kemmarat (residence at Savannakhet).
7. Bassac (residence at Ban-Mouang).

It will perhaps be of interest to compare some of the data contained in these tables with information which we have cited previously (1).

(1) Chapters II and IV.

161

Thus, by adding the figures given in the above tables, we find 259,750 square kilometers for the total area of Laos instead of 267,000, including 139,250 for northern Laos instead of 155,000, and 120,500 for southern Laos instead of 112,000. These differences may seem large, but in view of the fact that no complete triangulation has yet been carried out in Laos the figures 259,750 and 267,000 are close enough to one another so that they need occasion no observation.

The same cannot be said for the population. The figure 470,000 (including 170,000 for Upper Laos and 300,000 for Lower Laos) given by the Superior Resident seems to be a minimum. We [302] believe that the figure of 517,100 (199,500 for Upper Laos and 317,600 for Lower Laos) which results from adding together the figures in the tables more closely approaches reality. It is given, moreover, by the most recent notices published on each province.

In sum, it may be said today that the total population varies between these two figures and that it is approximately 500,000 inhabitants. What is more, the population of Laos is tending to increase with each passing day.

The figure 49,221 for registered persons in Lower Laos, or approximately one registered person for every six inhabitants, seems fairly correct. That for Upper Laos (65,452) is much too high and should certainly be decreased by half. It is to be supposed, moreover,

13. Sources of Sulphur

316 Sources of sulphur have been noted in the provinces of Cammon, Saravane and Darlac.

As a supplement to this list, the reader is referred to Appendix XXI, in which several goldbearing deposits are noted which have been prospected, but for which concessions have not yet been granted and which are not being worked by any European enterprise. We shall now continue with a consideration of the conditions under which various other deposits, such as iron and salt, occur.

Iron. The various iron deposits which exist in Laos are alluvial deposits caused by the erosion of rocks under the action of rain water and water courses. They occur sometimes in hills from two to three hundred meters high, and sometimes in hillocks of a lesser height which do not exceed fifty or sixty meters.

The ore is found scattered throughout the mass of reddish clay alluvia, in flint nodules and isolated blocks of small dimensions. The richest ores are formed of irregular masses of a reddish cellular rock somewhat similar to millstone rock, but softer.

The ore is extracted in furnaces provided with alternating blowers. These are first loaded with a layer of crushed and washed ore, then a layer of charcoal, and the layers are thus repeated several times. When the process has been completed a bloom of spongy iron is left at the [326] bottom of the furnace, and this iron is reheated and puddled. When the molten mass is sufficiently homogeneous, blacksmiths take it and transform it into farming implements--axes, machetes, etc.--all of which are sold locally.

[439] Production from the iron deposits in Laos is not sufficient for the needs of local consumption, since [319] [Illustration] [320] [Blank page] [321] iron is imported from Europe in small bars and sold for from 1 franc 30 centimes to 1 franc 50 centimes per kilogram.

It is unlikely that the country's iron deposits, at least those which have so far been discovered, will ever justify exploitation by European methods, because of their insufficient size.

317 Salt. The same is true in the case of salt, and the country's production is insufficient for local consumption.

The salt mines, or, to use the proper term, saltbearing deposits are of three different kinds:

314 Indeed scavenging, that is to say the gathering of forest products, hunting and fishing, is all that is needed besides rice and maize to supply the day to day needs of the native and even provide him with a comparatively important basis for trade.

Forest Products

1. Benzoin (Khab-Niane).

314 804 563 Benzoin is extracted from the tree called Styrax benzoin, by means of incisions made on the trunk. The benzoin trees (Kok-Khab-Niane) are localized in Upper Tran-Ninh, the south of the Hua-Pahn and the north of the province of Luang-Prabang. They are not cultivated in any way. The resin or gum is harvested at certain times of the year, generally by the Khas, at the foot of the trees and along the trunk, where it coagulates in masses or tears.

Benzoin is collected in its natural state, that is to say in tears of various sizes and in breakages. In the production centers it is separated into three grades: large and medium tears, medium and small tears, and small pieces and breakages. In the transit markets these three grades are sorted and screened and once more divided into six kinds or types, which are: large tears, medium tears, small tears, mixed large, mixed medium, and finally tiny fragments and dust.

431 435 A few years ago a chemical process was [329] discovered, it would seem, for extracting certain of the aromatic alkaloids contained in benzoin from coal, and the market value of this product suddenly dropped by more than sixty percent. At the present time, depending on the grade, the market price in Luang-Prabang is from 90 to 115 francs per hundred kilograms (1), in Nong-Khay from 100 to 135

(1) We have deemed it preferable to give the price in francs and per hundred kilograms, since the reader may not be familiar with Laotian weights and currency.

788 francs, and in Korat from 120 to 160 francs.

314 439 Part of the benzoin production is consumed locally in the manufacture of sticks of incense for use in worship. All the rest is exported to Bangkok and from there to Europe. A very small proportion is sent to Tonkin by way of the Black River. Upon its arrival in Bangkok, benzoin from Laos is worth twice as much as in Luang-Prabang.

804 314 ### 2. Crimson lake or stick-lac (Khang-Deng).

This gum is produced by an insect of the "cochineal" type, the

314 plentiful by half than the first, yields a clear, sinewy, dry and elastic
824 rubber in threads and sheets.

Rubber from the second harvest has been submitted to competent individuals for examination, and it seems that it would bring a price of 8 to 10 francs per kilogram on the European market.

435 In April 1900 the purchase price of this product per hundred kilo-
314 grams was 137 francs in Vien-Tiane, from 166 to 208 francs in Muong-Son, 290 francs in Cho-Bo (Tonkin) and 550 francs in Vinh (Annam). Its resale price was 625 francs in Saigon, 700 francs in Singapore and from 800 to 1000 francs in Europe (1).

(1) This refers only to first grade rubber.

These figures suffice to show that Laotian rubber is a choice product in high demand, and a first-rate trade commodity holding the promise of sizeable profits.

• 439 The total amount of rubber exported from Laos in 1899 through
314 the ports of Tonkin, Annam and Cochinchina is estimated at some fifty tons. For 1900 the figure would appear to be about eight times larger (2). This trade has only developed in Laos in the last two or

(2) See Appendix XXII.

three years, but now that the initial impulse has been given and the people are beginning to harvest the latex which they used to scorn because there were no outlets for it, the traffic will not cease to increase from one year to the next, since rubber finds an increasing demand on the European market.

Although the lianas are extremely plentiful in the Laotian forests, care should now be taken to spare them as they are exploited and to increase the number of plants so as to avoid any shortages in the future.

314 18. Pine resin (Khi-Kok-Phek or Niang-Phek)

Pine resin is used in Laos only when mixed with crimson lake. It is used for making a varnish and certain mastic compounds. It has a very low value, never more than 20 francs per hundred kilograms and [342] sometimes as low as 6 francs. None of this product is exported. It would be easy to introduce the regular cultivation of pines and the harvesting of their resin into the land, if sufficiently remunerative outlets were opened up.

Hunting

224 Hunting, for the inhabitants of Laos, is another form of scavenging, since it procures them either live animals or the remains of the same without any great labor or expense.

411 For the Laotian, time does not count. He makes his powder himself, and with the exception of firearms his hunting devices are also 224 of his own fabrication. With the help of this far from perfect equipment he is nevertheless able to capture live elephants and to procure the ivory and remains of those which he kills, as well as the hide, [438 talons, bones and horns of a multitude of other animals. All these products are so many trade commodities for him. The flesh of all 262] these animals, moreover, makes a sizeable contribution to the diet of the Laotian hunter. It is a feast for him, for his family and for his entourage.

[325 [344] The natives have a perfect knowledge of the habits and customs of all the representatives of the local fauna. Patient, adroit, 224 endowed with excellent powers of hearing and sight which are further developed and sharpened by practice, they are not afraid to attack the tiger and other large animals despite their rudimentary weapons.

Lying hidden for hours at a time, motionless and silent and abstaining from smoking, the hunter waits for his victim without losing his self-control. When it approaches within a few meters of him, his sure eye and untrembling arm enable him to strike it dead with a bullet or with a poisoned arrow shot from a powerful crossbow.

One is astounded at the results achieved with weapons which are so imperfect, as much by their rudimentary construction as by their age, and which often lead one to fear more for the hunter's life than for the beast's. We must admire these men who, although reputed to be cowardly, brave danger with such primitive weapons and go in search of wild animals in their very lairs, killing them at almost point-blank range so that oftentimes the wad from the gun singes the animal's fur or the arrow goes in one side and out the other.

411 The firearms used by the Laotians are flintlock or muzzle-loading 439 rifles, some of which are of Siamese or Burmese manufacture. Others are imported from Europe through trade or in private cargoes. There are also old regulation rifles, British and others, chiefly those which bear the image of a cock and the word "Tower" stamped on the lock or breech.

411

The Laotian, as we have said before, makes his powder himself. He also casts his bullets, which are usually only shapeless masses of lead or iron. In view of this fact it is not surprising, with such ammunition, that his guns do not have even a medium range. He is therefore forced to shoot from a very short distance, often less than five meters, if he wants not merely to hit his prey but to strike it in the right place so as to fell it on the spot and not risk becoming the victim of a wounded beast.

[345] European weapons tempt him because of their careful construction and long range, but if by chance he does try them they do not yield the same results in his hands as his own do, imperfect as they are. Thus he prefers his own weapons to ours, finding them better adapted to his eye and his arm.

[439]

For several years now, however, double-barreled hunting rifles of an inferior quality and Winchester muskets of the already outdated 1878 model have been imported into Laos through Siam and Burma. The careful maintenance which such weapons require, the high price of ammunition and the difficulty of obtaining new supplies are all reasons preventing their widespread use. Thus they are, so to [554] speak, only luxury items possessed by a few fortunate Laotians who have acquired them out of ostentation rather than for use.

Firearms and crossbows are not the only hunting devices used in Laos. Indeed, there is no lack of ingenious instruments, some simple and some complicated, but always perfectly adapted to the particular purpose to which they are destined. They are made with perfect artistry and care, with a view towards capturing the most diverse forms of wild life, from the largest pachyderms such as the elephant down to the smallest bird. Traps, deadfalls, snares, springes, nets, birdcalls, etc. complete the Laotians' hunting equipment. All these devices are manufactured by them during the rainy season, when they are confined to their houses. They are like our peasants who profit from the long winter evenings to make all the little things which they will need during the course of the year.

Rifles and crossbows are used only in hunting the larger wild animals. The natives use special methods to capture elephants.

224

This pachyderm once lived in great herds in all the parts of Laos which offered grassy plains, valleys and high plateaus, especially where certain varieties of bamboo, wild banana trees and graminaceous plants which [illegible] to its taste grew. Nowadays, because

243
262 In reality, this is neither always nor everywhere the case. There are bad years when, because of a shortage of water, production in the ricefields falls by 30 or 40 percent, and the natives are then obliged to turn for their food to the roots, yams and taros which they find in the forest.

[311] [356] It is the northern part of Laos which mainly suffers from this sad state of things, as a result of its hydrological régime, the particular disposition of its farming land, and the fragmentation of the latter into relatively small plots which are remote from one another.

312 In southern Laos the vaster plains and a more complete natural irrigation which can easily be increased as the need arises make it possible not only to satisfy local needs but also to provide paddy and threshed rice for export. Thus in 1898 900 tons of paddy were exported to Cambodia and Cochinchina (1).

439

(1) These exports, which seem rather slight, will certainly increase provided that crops are good.

243
439 Here, by way of indication, are some current prices per hundred kilograms of paddy and decorticated rice:

Northern Laos	Paddy	4 francs 10 centimes to 9 francs
	Rice	8 francs 30 centimes to 10 francs 60 centimes
Southern Laos	Paddy	1 franc 65 centimes to 3 francs
	Rice	8 francs 30 centimes to 12 francs 50 centimes

243 In the figures given above as representing the amount of cereal grains needed to feed the population, we should include a certain quantity of maize. We do not have sufficient information to be able to show its importance with respect to the total production of cereals and consequently to say by how many tons the total figure for the paddy crop ought to be reduced in order for this difference to be applied to maize.

Nevertheless, if we take as a basis the total number of inhabitants who grow this crop, we may estimate that in northern Laos the ratio of maize production to that of paddy is about one to five. In southern Laos this crop is much less extensive.

243

the plants are replanted a few centimeters [360] apart in a second seed-garden for growth. This procedure increases the plant's productivity quite appreciably.

243
312

Since the nature of the terrain and the richness of the soil vary from one point to another, it follows that the yield from the ricefields is not uniform. By reason of these conditions and the varying amount of water which falls on the fields or is piped in, this yield varies from 40 to 90 parts for one part of seed, and from 15 to 25 piculs per hectare (1). The rice is harvested about four or five months after

[101]

(1) In Cochinchina the average yield is from 28 to 30 piculs, and in Tonkin 44 piculs. But one should not lose sight of the fact that Cochinchina and Tonkin are much better favored than Laos from the point of view of irrigation, and that the Annamites are past masters in the art of farming.

transplanting.

243

2) Terraced ricefields. The soil is worked in the same way in these ricefields, except that in some cases the land is turned over with a spade instead of plowed.

3) Mountain rais. In the year following the one when the land was cleared, the soil of the rais is cleaned and weeded. Then in June the rice is sowed, either broadcast or else by dropping a few grains at a time into holes made with a kind of bamboo dibble.

The rais are harvested in October and even in September in some localities. In general the yield from rais is from 90 to 120 parts for one part of seed and from 10 to 20 piculs per hectare.

Maize is sowed directly in straight furrows about March or April, and is harvested in July.

249

TOBACCO. Tobacco (Ia-Doute) is widely consumed in Laos, where everyone smokes. It is also an excellent commodity for trade and export. It is cultivated on a large scale on the banks and islands of the Mekong from Pak-Lay to a point below Pone-Pissay. Production [439] from the tobacco fields in these regions not only supplies local needs, but also those of all of Upper Laos and part of Lower Laos and provides tobacco for export to Siam and Cochinchina.

[361] In addition to the foregoing, almost the whole population along the banks of the Mekong and the lower reaches of its tributaries also grows tobacco for its own use and for the inhabitants of the interior. The tobacco which is most prized for its high quality, however,

249 is that grown in the regions which we have just mentioned. Because of its origin and the name of the two main distribution markets of the trade, it is called Nong-Khay or Vien-Tiane tobacco.

We do not have exact data on the annual production of tobacco in Laos, because of the excessive fragmentation of the plantings and the absence of a crop registry. But information gained from commercial statistics enables us to say that in 1898 exports from the Paklay-Pone-Pissay region reached more than 42 tons. Also, if we attribute to each [276] inhabitant two grams of tobacco per day (this is not an excessive figure) or ten grams per family of five, we find that total consumption in Laos would be from 340 to 345 tons annually, or a total production of about four hundred tons (1).

(1) See Appendix XXIII.

[435 439] The export sale price varies from fifty to a hundred francs per hundred kilograms, depending on the quality.

248 COTTON. Cotton, a herbaceous and annual plant, is cultivated almost everywhere in Laos for local consumption, and particularly in 439 northern Laos for export to Yunnan. In fact, this product is almost the only return cargo for the mule and horse caravans which come in each year from Yunnan-Fou, Tali, S'semao, etc. with tea, furs, iron and copper pots, knick-knacks, etc.

248 The farming methods in northern Laos are as follows. Seeds are placed in pairs in holes which are about ten centimeters deep and spaced at varying distances depending on the region. Stony ground is preferred, on which the brush has been burned away both to clear the land and also [362] to fertilize the soil. No other fertilizer is used except the ashes of the vegetation which covered it.

The seeds are sowed in April or May and usually germinate a few days later. The plantings are harrowed and weeded twice each season, and harvesting is usually finished in November. The cotton is of a mediocre quality, with short staples, but despite this defect it is highly sought-after, as we have seen above, by the Chinese caravans which buy all of the available supply each year at the chief local markets. The height of the plant at full yield does not exceed sixty centimeters, and the yield per kilogram of bolls averages thirty percent or about 300 grams.

248 In southern Laos the cotton fields are small in extent, widely 311 scattered and formed chiefly of narrow strips of alluvial terrain on the

249 either in the natural state or in the form of black, pasty, molasses-laden sugar.

There are several varieties, the chief of which are the heavy, green cane which is highly cellulated, and the small violet-colored cane with joints closer together, which is fuller than the first.

Farming methods do not differ from those used in other countries. Cuttings are planted, and the plants are topped if they show a marked propensity to excessive leafy growth.

257 To manufacture sugar, the cane is crushed between two vertical
407 cylinders driven by two wooden gears of a most ingenious construction. A buffalo turns the whole by means of a crossbar or shaft, the end of which is attached to its neck and constitutes a whim. Sometimes the cane is crushed between two pieces of stone or hardwood, one of which rests on the ground while the other [364] is applied on top of it by means of a wooden lever. One or several persons work the other end of the lever with all their weight and move it up and down in a series of
[439] jerky motions. The juice extracted from the cane is placed in large
[415] cast iron cauldrons shaped like cupels, which are imported by Chinese merchants. Condensation takes place over an open fire laid in primitive hearths which are cut into the ground itself, if it is clayey. When the syrup reaches the desired degree of thickness the whole mass is poured into rectangular or circular molds made of wood or bamboo. After cooling the loaves of sugar which come from the molds, and which are from three to six centimeters thick, are wrapped in dry leaves. They are transported and sold in this form. The cane itself is called "Oi" and the sugar "Nam-Oi" or, literally, water of cane.

[276] The Laotians do not refine alcohol from the juice of sugar cane,
101 and are even ignorant of the initial refining stage which the Annamites use and which produces brown sugar.

[435] The price of sugar on the markets of Laos varies from one point to another, and transactions involve small quantities only. Statistics do give evidence, however, from which market prices of 35 to 50 francs per hundred kilograms can be deduced.

249 INDIGO. We have seen above that the Laotians use the indigo-bearing properties of certain plants which grow wild in the forests in order to dye cloth goods blue. They also produce a variety of indigo, the Indigofera tinctoria, which is similar to the variety found in Bengal. The plant itself is called "Kok-Kame" and the extract or dye "Nam-Kame

249
263
438 Chinese and Laotian middlemen and even the few European merchants--have found that it brings in rewarding profits. Indeed, by exporting this product the latter are assured of an almost certain gain of 20 to 30 percent.

248
439 [387] Ramie. There is also much to be gained from increasing the production of ramie or Chinese nettle. It is assured of an outlet in Cambodia, where it sells for as much as 80 francs per hundred kilograms.

219
185 Cinnamon. The extension of the plantations and gardens of cinnamon trees already in existence in the province of Vien-Tiane deserves serious encouragement. The bark of these trees is a valuable product which is much sought-after in China and in Europe.

276
656 Opium poppies. The Government of Indo-China, which is both the preparer and seller of chandoo or opium for smoking, is the party which would gain most from obtaining the raw drug on French territory. It is, indeed, still dependent on British India for this product, and can acquire it only on extremely disadvantageous terms.

Since much time must still pass, however, before the Meos and the Yaos give up their age-old methods, it would be essential for the intensive cultivation of the opium poppy to be undertaken by Europeans on behalf of the administration. This would be possible if there were a guaranteed labor supply in the form of Chinese coolies, who would be enlisted primarily for the greater part of the work, and of native specialists who would deal only with scarification of the capsules, harvesting the opium and the first stage of its preparation.

These delicate operations are the ones which the Meos and the Yaos like best, but they dislike plowing, fertilizing, weeding and irrigation, all of which tasks are indispensable for obtaining a high yield of capsules and consequently of the raw drug. It would therefore be best to entrust this heavy work to foreign coolies, and it is probable that after a certain time they too would be capable of extracting the opium. Impelled by their example, the natives would doubtless then be seen to break with their prejudices and devote themselves also to intensive cultivation so as to reap its full benefits.

The role of the administration would then be at an end, and it would gradually diminish its intervention as free cultivation of the poppies increased.

[435 Raw opium which is produced locally or which comes from [388] neighboring countries is worth 22 francs, 50 centimes to 32 francs, 25 centimes per kilogram, depending on quality, in northern Laos.

231 elephants in particular.

[439] Exports of elephants from Lower Laos in 1899 numbered 115 animals worth 100,754 francs.

Horses. Most regions of Laos lend themselves to the raising of horses, although these animals do not occupy the prominent place which they might. On the contrary, an appreciable decrease in the number of horses has occurred, and it is difficult today to obtain suitable mounts in the immediate locality. The causes underlying this decrease seem to be the following:

[398] 1. The many purchases made in southern Laos for Cochinchina, Cambodia, Annam and Siam;

2. The high prices offered to breeders, leading them to get rid of their stud-horses and their mares.

As a consequence, mares have become rare in the country. As for stud-horses, it is difficult to obtain any, since horses find buyers as soon as they reach the age of two and are taken out of the [Illustration here] country. Most of the finest stallions have disappeared, and practically nothing but old horses, scarcely worthy of the name of stallions, are left.

651 231 It was to remedy this state of affairs that the Governor-general of Indo-China, acting on a proposal by the Superior Resident, created depots of stallions.

Premiums are also paid to breeders who put up mares for covering, and during three consecutive years a premium is also awarded to the issue if it is in good condition.

It would seem that the establishment of these depots has not yielded all the results which might have been expected.

[399] The stud-horses have not always been chosen with all the care desirable, and as for the Laotians, despite the premium which is paid them, they do not seem at all eager to put up their mares for covering.

Under present conditions, horse breeding cannot give good results. As long as the heads of province do not have chief guardsmen in their service who not only have a sufficient knowledge of horses, but above all have an interest in the matter, they will have to give up all hope, except for a few exceptions, of improving the breed of horses. Moreover, the pecuniary resources placed at their disposition seem to be insufficient. Nor can too much reliance be placed on the natives, for whom the bait of premiums is not an effective stimulus.

231 Horses and mares live in the utmost liberty, and no selection is made for covering. The latter occurs completely at random, and mares are covered by the first old nag which is so inclined.

Nor is any greater supervision given to the young colts. They get their food where and as they can, for except for a few rich mandarins the natives never give paddy to their horses.

Furthermore, they are broken much too young. Most of the time they are soon wounded on the back, and since they are never bandaged their injuries often turn into great wounds which soon render them incapable of any service.

In sum, the first improvement ought to consist in the following: feeding and bandaging horses well, eliminating all specimens in covering which are inferior with respect to age and stature, and supervising the growth of offspring.

Once this first step has been taken, and when an improvement has been noted in the breed, a few Tarbes or Arabian stallions can be introduced into the land. Such a depot of stallions should be placed under some European who belongs to the French Stud-farm Department [Administration des Haras de France]. Under him as stablemen he should have Annamites [402] or better still Malays from Cambodia, who have special aptitudes for work as grooms and who are known as Sais (1) in Indo-China. For the present it will be of no use to employ

(1) Sais, donkey drivers in Egypt, coachmen and grooms in the Far East.

Laotians, until such time as they acquire more of the taste and habit for horses.

The establishment of this initial stud-horse depot would enable only a few commissionerships to regain a good stock of horses, and even then only animals at least four years old should be released. Thus no thought need be given for some time as yet to the commercial question, that is to say the exporting of fine horses.

As to the establishment in the principal commissionerships of depots of Tarbes or Arabian stud-horses, no thought need be devoted to this possibility either, since the resources of Laos are too scanty and can be utilized in a more useful fashion.

231 439 Here are the figures for exports of horses, in southern Laos only, for 1898 and 1899, together with their domestic prices and their sale prices at the outlet markets:

231
439

Years	Number of animals exported	Average purchase price in Laos	Sale price at outlet markets
		francs	francs
1898	103 Horses	50	112.50
1899	185 Horses	From 30 to 125	From 88.50 to 225
	14 Mares	From 30 to 75	From 40 to 95

231
185

Finally, we recommend the introduction of donkeys into Laos, with a view toward producing mules by coupling the donkeys with Laotian mares. The mules of Yunnan, which are highly reputed, reach heights as great as 1.32 meters. Extremely sturdy, they can readily carry a net weight of ninety kilograms of merchandise, not counting the saddle and pack-saddle. It is obvious that much use might be made of these animals in Laos for all kinds of transport.

654
231
[527]
[182]

Buffalo. Buffalo breeding is much in honor throughout all of Laos. It supplies the needs of agriculture and of food consumption, which [403] absorbs a large number of these animals, particularly young ones. Many of them, in fact, are sacrificed on the occasion of celebrations and various ceremonies, while others are used daily for food in some of the larger centers.

It may truly be said that buffalo are raised everywhere, and since this animal is extremely hardy it can always find enough to eat, even in the forests.

The administration is encouraging the raising of buffalo in a most effective way, and since our arrival in Laos the work has grown by such proportions that exports of buffalo to nearby regions has assumed genuine importance. (4,721 head in 1898 and 3,144 in 1899.) When we entered into possession of Laos, however, the land had been largely depopulated of its animals. They had been removed by the Siamese, and it is nothing short of miraculous that the herds have been restored in so short a time despite the considerable losses caused by periodic outbreaks of epizootic disease, often extremely violent.

These favorable results have been achieved thanks to the wise foresight of the higher authorities, who prohibited all exports and imports as long as the bovine plague lasted.

231 654 It is much to be desired that the work of our physiologists may finally be successful and place at the disposal of everyone serums which will be capable of fighting the epizootic diseases which are decimating horned animals. In the meantime our administrators can only recommend to the natives a few rules of veterinary hygiene, a feeble protective measure against the epidemic. They should be particularly careful to see that dead carcasses are not thrown into watercourses.

231 492 262 825 Oxen. In Laos, oxen are raised mainly for use in transport or for export as animals for slaughtering. In the far north they are also harnessed to carts.

The Laotians have an instinctive repugnance for beef meat, and eat it only when an animal dies by accident or has to be killed as the result of a wound or broken bone. There are even certain prejudices and certain customs in this matter, which are doubtless vestiges of another age when the ancestors of the present-day inhabitants were pastoral people among whom slaughtering [404] oxen for food was prohibited under penalty of a fine.

231 Whereas the buffalo in Laos are sturdy and of a fine height, the oxen often leave much to be desired. This is due to the fact that the natives raise oxen as they do buffalo, that is to say by leaving it to forage for itself. Although the buffalo, a hardy and autochthonous animal, requires almost no care in breeding, the ox, which is a cross-bred animal, imported and not so tough, requires a great deal of care and management. But when ox raising is treated like buffalo raising, the result is an inferior product and thence a progressive degeneration of the breed.

The Youns, the Lus and the Burmese are the only ones who have a complete mastery of raising oxen as draft and pack animals, and who produce individuals of comparatively tall stature which are sturdy, courageous and resistant to fatigue. They are even able, thanks to suitable treatment and care, to condition and train the often puny specimens which they sometimes go great distances to buy, even into southern Laos.

231 The oxen of Song-Khone (1) and of the Kham-Thong-Niai-Saravane

439 (1) In 1898 the presence of about 1,500 oxen and cattle was reported in this province.

region are destined mainly to be sold for meat in Cambodia and in Cochinchina, and this is quite a lucrative trade.

436 Coins. The old Laotian silver and copper coins in the shape of a pirogue which used to be used in the principalities of Vien-Tiane and Luang-Prabang can no longer be found today and have become curiosities. As a result of the Siamese incursions, the coins of Siam and India (Tical and Rupee) replaced the native coins. Finally, since Laos has become a French possession, the only officially recognized coinage is the French piaster of commerce (1) and its subdivisions.

(1) As well as the Mexican piasters of Hong-Kong and Singapore and the Japanese yen.

However, the Siamese and Hindu coins continue to circulate alongside this official coinage, and are in fact indispensable for transactions by reason of their weight, which bears a direct relation to the system in force in the land (2).

(2) The scale of equivalence between weights and coins is based on the standard of the "Salung" or tenth part of the Hong-Kong "Tael," which weighs 37.53 grams. This Tael is recognized as official for weighing opium. One might nevertheless just as well take as a basis the tenth part of the Shanghai Tael, which weighs 38.88 grams. This would give the picul a theoretical weight of 62.222 kilograms instead of 61.924 kilograms.

Silver in Laos, whether in the form of coins, bars, ingots, pieces of jewelry, etc., is regarded as merchandise and is bought and sold by weight without taking into account the agio which causes fluctuations in the market price. This is due to the fact that the Laotians, since they do not yet have direct trade and banking relations with neighboring countries, have no remittances to make in the trade centers where the agio [415] [Illustration] [416] [Blank page] [417] is felt and are ignorant of its effects on the conventional value of specie.

438 But in the last few years the middlemen of Laotian trade circles--
439 the Chinese and Burmese--who are in direct relation with the centers where the agio prevails have been feeling its effects, and the latter have had repercussions on the great mass of Laotian producers through progressive increases in the price of imported merchandise.

In certain regions the absence of small coins obliges people to cut up pieces of silver, jewelry, bracelets and necklaces, or else to melt down the silver from fragments and jewelry and cast them in the

436 It will perhaps be of some interest to note here that the peoples of Laos have no respect for European gold coins, [420] because their gold 822 is alloyed with copper! In this country, as in all of the Far East in 439 general, it is thought that gold is the noble metal par excellance, that 177 it is polluted and diminished by alloying it with copper, which is unworthy of it, and that it can endure being made into an alloy only with silver.

The only "gold" coins in use, and still not at all currently in northern Laos, are books of gold leaf the thickness of tinfoil. They come from China and bear the official stamps of the country's banks which put them into circulation as "merchandise" in the same way as bars of silver.

Weighing instruments

405 The weighing instruments used in Laos include the "Ta-Dieng" or "Sing," a Chinese steelyard made of wood which has three rows of graduations. It may have a hook or a single platform, and is used for weights ranging from one "Sang" (1.23849 kilograms) up to several piculs.

For weights of less than a "Sang" the same kind of Chinese steelyard, with a hook or platform, is used, but it is smaller and made of ivory or bone.

A small pair of beam scales with platforms shaped like cupels, which is called "Sing-Dieng," is used mainly for weighing precious metals and gems.

There are several series of weights for balances. They are made of bronze, iron or copper and are most diverse in shape, representing elephants, imaginary birds, hexagons, pentagons, cones, pyramids, etc.

2. TRADE COMMODITIES AND PRODUCTS OF EXCHANGE

438 Since there is no industry to speak of in Laos, the local products 241 which make up the basic commodities of interior trade and exports come mainly from agriculture, livestock raising, scavenging, fishing and hunting. Mention may be made, however, of certain products of local, not to say familial, industry which enter into interior commerce and to some extent into the trade which goes on with neighboring countries.

438 [421] These include cloth goods of pure silk, either plain or 433 spangled with gold, goods of silk blended with cotton, and wholly cotton goods, then articles of jewelry and goldsmithing, and finally metals and ores from the still rudimentary mining industry and pottery goods, edge-tools, basketry, etc.

439
563 Goods are imported in the northern part of the land by the Hos, the Burmese and the Ngieous, in the form of merchandise from Yunnan, Tibet, China, India and even Europe. They include furs, iron and copper pots, tin, cotton and silk clothing, small wares, tea, articles for opium smokers, horses, silk, cotton and light wool goods, lacquered boxes, swords, machetes, rifles, etc.

In the middle region and the south, Chinese, Cambodians, Siamese, Annamites and Europeans import the following articles: salt, cloth goods, thread, hats, knit wear, blankets, umbrellas, petroleum, matches (1), worship articles, dyes, bars of iron, porcelain bowls,

(1) Of Japanese manufacture imported through Bangkok and Moulmein, and of Annamite or Tonkinese manufacture imported through Saigon and Vinh.

perfumes, clocks and watches, glassware, paper goods, hardware, copper goods, nails, locks, drugs, a few Chinese staples, etc.

Since Laos has no direct access to the sea, it has no maritime outlets. It gives up its export products to middlemen established in Siam, Yunnan, Annam, Cambodia or Cochinchina, and these middlemen re-export Laotian products to various overseas markets or resell them on the spot for local consumption.

3. PRESENT-DAY COMMERCIAL ESTABLISHMENTS. COMMERCIAL PROCEDURES.

439
441
563 Just about everyone engages in trade in Laos, in highly variable proportions, to be sure, and each according to his resources. There are, however, real merchants, [422] businessmen and traders who are the middlemen between the native producers and the exporters in neighboring countries or on the coast. The greater number of these, and also the most active ones, are the Chinese, then come the Hos and the Burmese. They may act either on their own account, or in behalf of a small local syndicate, or again as representatives of Chinese or European houses established in the ports.

The Laotians are more likely to operate individually or in family groups financed by nobles, officials of high rank or wealthy men who use this means of putting to work the capital which business has already brought them.

439
441
443

Europeans are beginning to come to Laos for the purpose of engaging in commerce. They generally settle on the banks of the Mekong.

Large business houses in Cambodia and Cochinchina support various enterprises with their money. They provide an outlet for the natural products which they assemble, and supply their agents with merchandise for exchange. The latter operate in the following manner. They have touts who range over the interior of the country with a stock of imported articles which they sell or exchange, in whole or part, for local products. At certain times of the year, generally after the waters go down, temporary markets spring up at fixed points, generally at the Mekong's junctions with its chief tributaries. The middlemen set up their merchandise, and the producers come from the interior to make trades, purchases or sales and to acquire the objects which they need and which neither the country nor local industry can supply. Oftentimes also the producers do not have to move about, and the buyers come and find them in their villages.

In addition to these small markets there are larger ones such as those of Luang-Prabang, Paklay, Vien-Tiane, Nong-Khay, Oubone, Bassac, etc., where the touts and small tradesmen bring their regional products. It is in these centers that merchandise accumulates, and it is from here that it leaves for the great markets in neighboring countries and for [423] [Illustration] [424] [Blank page] [425] the ports. Here too the small retailers lay in new supplies of imported products which will be sold in the course of the year for daily consumption in the muongs and villages.

The present organization of commerce in Laos is harmful to the interests of the producers, in the sense that the temporary markets where exchanges are effected are highly scattered, with no link between them, and are often quite remote from the larger centers. The result is that a few import traders lie in wait at the crossroads to the interior or else go into the interior and dictate to the natives, who are ignorant of the value of the trade commodities as well as of that of the country's products in the larger centers. They profit from this state of affairs in order greatly to increase the prices of imported merchandise while at the same time undervaluing local products among the natives. At the present time the latter are therefore at the mercy of these small ambulating merchants, who are in league to fleece them.

Measures should consequently be taken to remedy these conditions, that is to say to defend the economic position of Laotian producers, our nationals, against the rapacity of the merchants--

439 almost all Chinese, the masters of the markets--who scour the country
441 and leave behind none or almost none of the profits which they ex-
tract from it.

443 Might not the administration establish, for example, periodic fairs under its supervision which would be held in certain suitably chosen spots? Under its direction market prices would be posted and placed within everyone's ken, and the daily market price could be found of import and export commodities on the nearest large markets and even on coastal markets. Producers would thus gain correct information on the value of their merchandise and would be in a position to decide whether it was to their advantage to operate locally or to go further on before making their transactions.

The question would still remain of giving strong encouragement to private initiative with a view toward the establishment of repositories or emporiums equipped to handle the natural products of the country in wholesale or retail quantities. Such [426] trading posts or factories could compete with the present-day traveling merchants by offering higher prices and also supplying imported goods on more favorable terms.

175 The French Syndicate of Laos [Syndicat français du Laos] made a be-
441 ginning in this direction as early as 1890 and 1891 by establishing its factories at Luang-Prabang, Nong-Khay and Xieng-Hong and later on, in 1892, at Bassac and Outhene, thus distributing factories spaced along the great river over an extent of nearly 2000 kilometers. The guiding idea of the promoters and stockholders of the Syndicate was that its agents should above all else be precursors and pioneers of a fertile idea, just as its counters should be landmarks for future and lasting establishments to be created after their example and beyond their initiative. Once this task had been accomplished, however, the pioneers dispersed and the landmarks so successfully placed were not utilized.

439 Yet isolated attempts made in recent years by several of our
441 countrymen have not always, it must be confessed, been crowned with
443 success. Without special commercial aptitudes, without either the necessary capital or credit and consequently not able to supply themselves at first hand, and restricted by the system of customs now in force in Indo-China, they have not succeeded in all their operations despite their real efforts and their unquestioned good will. Neither should we lose sight of the fact that commerce in Laos should not seek its chief profit in the sale of imported products, but rather in the exportation of a few selected natural products such as sticklac, benzoin, cardamom and rubber, among others.

439
435 The following table shows the considerable discrepancy between purchase prices within the country and sale prices on transit and European markets.

[505] In the last seven years Laos has become a French possession, but the interior conditions of trade and exchange have not varied. A single modification has been the fruit of our occupation, the creation of a line of steam transport on the Mekong. This service, although still not perfect, nonetheless constitutes [427] [Illustration] [428] [Blank page] [429] the most economical route from Luang-Prabang or Nong-Khay to Cambodia and the sea. Unfortunately, the customs barrier is there to stop the products which our industries do not yet manufacture but which our merchants could import into Laos in competition against those brought in through Siam, Burma and Yunnan.

Markets	Sticklac per 100 kilograms	Benzoin per 100 kilograms	Cardamom per 100 kilograms	Rubber per 100 kilograms
	francs	francs	francs	francs
Hua-Pahn (Laos)				1st quality 166 to 208 2nd quality 85 to 115
Nong-Khay, Vien-Tiane (Laos)	50 to 60	150 to 250	55 to 60	1st quality 250 to 280
Bassac (Laos)	38 to 40		92 to 100	
Pnom-Penh and Cholen (Cambodia & Cochinchina)	54 to 70		133 to 165	1st quality 540 to 625
Korat (Siam)	75 to 95	250 to 280	85 to 110	
Bangkok (Siam)	125 to 135	300 to 350	140 to 180	
London (England)	220 to x	500 to 700	250 to 310	1st quality 750 to 835
Hamburg (Germany)				1st quality ~800 to 1000 2nd quality 450 to 600

439
441

In spite of the disadvantageous conditions governing any commercial undertaking in Laos, two young merchants of foreign origin have not hesitated to resume part of the program of the French Syndicate. Financed and supported by one of the large Saigon business houses, they founded a similar trading post or factory at Vien-Tiane in 1898 (1).

(1) Two companies, one the Company of French Factories, the other the Company of Laotian Factories, have just been formed in Tonkin. It is their intention to do business in Laos.

They set to work courageously, sparing no effort and working themselves at the various handling operations with a view toward reducing their overhead expenses.

For nearly three years they have tried everything in the way of importing and exporting, without any particular bias, their ideal being to traffic in French products using commercial routes and a port which was also French.

[430] According to them, the status of their undertaking is as follows.

Although they benefit, like other importers, from the privilege of an eighty percent exemption from customs duties levied at Saigon on imported merchandise of foreign origin (1), they cannot compete

(1) It would seem that this exemption has just been suppressed on imports into French Laos, that is to say into the territories on the left bank of the Mekong.

One feature has resulted which is odd to say the least. Foreign merchandise coming from Saigon or Pnom-Penh, for example, and destined for Siamese Laos, that is to say for the territories on the right bank, benefits from an eighty percent exemption from duties levied on merchandise in transit through French Indo-China. On the other hand, merchandise destined for the left bank, which is French territory, pays the full duty without any reduction.

It is therefore to the advantage of merchants established in Laos to cross over to the right bank, that is to say from France to Siam! This is also an inducement to fraud, for the exempt merchandise on the right bank can cross over to the left bank without difficulty.

with the products of the same kind which come in through Bangkok.

439

The only French goods which do succeed, but in which traffic is too light for sufficient trade, are red cotton blankets (de Cours-Rhône) which sell for three francs in Laos, spirits, syrups, soap, perfume (low-priced), glass pearls, white sugar, cigarettes, smoking articles, etc.

Forced to give up importing French and foreign cloth goods, they do only a few rare exchange transactions with soap, pearls and a few small items. The rest of their transactions have to be in the form of purchases because of a lack of exchange products.

From the point of view of exports, rubber, horn and hides are the only articles which occasion any transactions.

Unfortunately exit duties, as well as local taxes, are exorbitant, and the port of Saigon is closed by customs both going in and coming out.

Cardamom in particular, of which there are great quantities, could form the basis for a certain amount of trade, but any movement in this direction is impeded by the comparative slowness of communications between Vien-Tiane [431] and Saigon, and by the requirements of the buyers, who want deliveries at fixed dates on this product.

Operations have been attempted in exporting lac, gums, cocoons, scrap silk, pierced cocoons and silk thread, but these have only ended in failure.

The benzoin of Upper Laos, which these gentlemen claim to be the best in the world, is too expensive. Furthermore, exit duties force the price up so high that it is unsaleable in Europe. They have had to abandon trade in this product to the Orientals who go to Bangkok.

[Illustration here]

To sum up, the following are the causes which, according to them, are hindering the progress and development of their trading post in Vien-Tiane:

1. The impossibility of obtaining on the markets of French Indo-China the French exchange products which are needed in Laos, since our industry does not produce them. Recourse must therefore be had to foreign articles. Now, certain of these are not to be had, and those which can be found are taxed with such high customs duties that they cannot compete with similar articles imported into Vien-Tiane by way of Bangkok, where they are taxed with only a slight three percent ad valorem duty.

2. The impossibility of selling cloth goods of French origin because of their high price, and those of foreign importation because of the customs duties levied on them.

489 [432] 3. The excessive distance to be traversed before any port is reached, and the consequent impossibility of effecting transactions on time in natural products with a variable market price, such as cardamom, among others.

4. Excessive customs exit duties and local taxes.

The above is an impartial exposé of the situation of the commercial trading post of Vien-Tiane, according to the very statements of the men who founded it. Yet in spite of everything these young traders have not lost courage. They hope for a better future which can perhaps be anticipated the day when some of the innovations of which we shall speak in what follows have become an accomplished fact (1).

(1) See same chapter, Art. 7 and Chapter X, Art. 4.

4. EXPORTS

439 Although the various products which constitute the exportable merchandise of Laos have already been examined, we present them here once again with certain complementary information on their value, importance, origin and destination. The figures contained in the following tables are to be regarded as a minimum (2) for exports

(2) In fact, many products are exported from Laos without their exit being officially recognized.

in 1898 and 1899.

I LOWER LAOS (3)

(3) We refer here only to exports from Lower Laos, since there is not sufficient information to be able to establish similar tables for Upper Laos. Further on, however, we shall give the total exports from Upper Laos for 1898.

A) Merchandise

		1898	1899
Total exports	Weight	1,281T	498,415T
	Value	442,629F	405,942F

439

			1898	1899
Break-down of exports	To Siam	Weight	81T	149.051T
		Value	45,892F	113,985F
	To Annam, Cambodia, ... Cochinchina	Weight	1,200T	349,364T
		Value	396,737F	291,957F

[433]

B) Animals

		1898	1899
Total exports.....	Number	6,572	12,042
	Value	436,710F	441,720F
Break-down of exports: To Siam.....	Number	2,292	3,128
	Value	133,735F	267,200F
To Annam, Cambodia,... Cochinchina	Number	4,280	8,914
	Value	302,975F	174,520F

C) Recapitulation

		1898	1899
Total exports: merchandise and animals	Value	879,339F	847,662F
Share of Siam in total exports	Value	179,627F	381,185
Share of Indo-China in total exports	Value	669,712F	466,477F

439
435

A. MERCHANDISE

Total exports from Lower Laos during 1898

Name of merchandise	Average purchase price per picul of 60 kilograms	Average sale price		Number of piculs exported	Total value of purchases made in the country	Observations
		at Phnom Penh	at Saigon			
Cardamom	22$00	32$00	40$00	4,675	102,850$00	Including 829 piculs exported to the right bank
Decorticated rice	2.00	?	?	72	144.00	" 12 " id.
Paddy	0.40	1.80	2.20	12,469	4,987.60	" 408 " id.
Chinese nettle	9.00	14.00	?	904	8,136.00	" 115 " id.
Lac	9.00	15.00	?	228	2,052.00	" 22 " id.
Betel nuts	5.00	9.00	?	72	360.00	
Tamboyan	1.50	25.00	33.00	24	36.00	
Wax	60.00	85.00	90.00	94 1/2	5,670.00	" 24 1/2 " id.
Ivory	400.00	470.00	?	9 1/2	3,800.00	" 45 k. " id.
Elephant bones	4.00	6.00	7.00	2	8.00	
Tiger bones	16.00	23.00	24.00	1 1/2	24.00	
Pirogues (single units)	30.00	80.00	?	601	18,030.00	" 2 " id.
Hides and horns	11.00	17.00	22.00	2,814	30,954.00	" 51 " id.
			Totals	21,365 1/2 piculs and 601 pirogues	177,051$60	

[434]

B) MERCHANDISE

439
435

Total exports from Lower Laos during 1899

Name of merchandise	Average purchase price in piasters per picul of 60 kilograms	Quantities exported		Total value of purchases made in the country
		piculs	kilograms	
Pimento	9	4	240	36$
Cotton	3 to 4.50	4	240	16
Ginger	3	2.12	132	7
Tobacco	18 to 24	2.80	168	60
Basketry	Unit price 1	40 baskets		40
Elephant fat	5		13	1.20
Anteater hides	11 to 12	11 2/3	690.30	136.20
Tiger pelts	4 to 7 apiece	one		6.60
Monkey hides	20	1 1/2	90	30
Lime	0.50 to 0.60	150	9,000	82
Domestic cotton goods	0.10 per meter	80 meters		8
Tortoise shell	9	2	120	18
Anteater scales	12	1/2	30	6
Tin	36	75	4,500	2,700
Buffalo horns	7 to 12	403 2/3	5,912.40	3,412
Ox horns	7 to 11	21	1,260	228
Buffalo hides	8 to 12	576	34,631	6,422
Ox hides	10 to 14	417	12,137.80	5,035
Wax	60 to 80	102 1/2	6,141.80	7,804.50
Cardamom	12 to 23	4,451	267,117.70	84,089
Ivory	180 to 400	6	353	2,065.78
Buckskin	9 to 20	638	38,280	9,305
Gum lac	9 to 11	244 1/3	14,669.80	2,439
Rhinoceros hides	17	5 1/2	321	93
Palm fibers	3	6	360	18
Chinese medicine	15	9	540	135
Gold dust	unit price in ticals	12370	21 ticals	268
Elephant bones	3	2.10	130	6.50
Tiger bones	15 to 18	2 1/6	130	35.30
Betel nuts	9 to 10	3	180	29
Chinese nettle	7 to 20	706.50	50,242	10,607.87

439

Total exports from Lower Laos during 1899 (cont.)

435

Pirogues	Depending on size	number	552	22,076
Hartshorn	9 to 15	194	11,630	2,577.20
Soft hartshorn	200		24	112
Rhinoceros horns	About 55 per kilogram		38.500	2,118
Spun silk	120	3	180	360
		General total		162,383$15

149: Reinach--323 G-3 (no date) 1901 AM1 Indochina
Laotians AM8

439
231
435

A) ANIMALS

Total exports from Lower Laos during 1898

Kind	Average purchase price of animal	Average sale price outside Lower Laos	Number of animals exported	Total value of animals exported. Average purchase price in country	Total value of animals exported. Average sale price	Observations
Elephants	350$	1,200$	192	67,200$	230,400$ (1)	(1) Prices offered in teak yards along the Menam.
Horses	20	45	103	2,060	4,635	
Buffalo	20	36	4,721	94,420	169,956	
Steers	9	20	1,056	9,504	21,120	
Pigs	3	6	500	1,500	3,000	
		Totals	6,572	174,684$	429,111$	

439
435
231

149: Reinach--324 G-3 (no date) 1901 AM1 Indochina
Laotians AM8

B) ANIMALS

Total exports from Lower Laos during 1899

Kind	Average purchase price of animal	Average sale price outside Laos	Number of animals exported	Total value of animals exported. Average purchase price in country	Total value of animals exported. Average sale price	Observations
Pigs	2 to 4$	4 to 8$	6,038	12,226$	24,452$	
Steers	8 to 12	10 to 24	2,184	21,840	43,680	
Cows	4.80 to 8	6 to 10	362	2,172	2,896	
Buffalo	20 to 45	35 to 80	3,144	94,320	157,200	
Horses	12 to 50	35 to 90	185	5,550	11,100	
Mares	12 to 30	16 to 38	14	280	400	
Elephants	300 to 450	12 to 1600	115	40,300	172,200	
		Totals	12,042	176,688$	411,928$	

149: Reinach--325 G-3 (no date) 1901 AM1 Indochina Laotians AM8

439
435

[436]

II UPPER LAOS

Total exports from Upper Laos during 1898

Name of article	Average purchase price in country, in piculs	Average sale price in nearby countries	Number of piculs or units exported	Value of purchases made in country	Observations
A. From Luang-Prabang (various merchandise)					
	$	$	piculs	$	
Cardamom (piculs)	18.00	27.00	150	2,700.00	All to the right bank.
Benzoin "	54.00	68.00	500	27,000.00	
Lac "	10.00	14.00	2,000	20,000.00	
Wax "	54.00	60.00	20	1,080.00	
Resin "	2.00	3.50	10	20.00	
Ramie "	18.00	21.00	50	900.00	
Raw silk "	125.00	150.00	45	5,625.00	
Hemp "	18.00	21.00	15	270.00	
Mats, per hundred	9.00	15.00	18,000 u	1,620.00	
Scarves and skirts	Variable		900 u	3,500.00	
Rhinoceros horns (piculs)	2,000.00	2,500.00	1	2,000.00	
Ivory "	360.00	430.00	3	1,080.00	
Horns "	7.00	9.00	40	280.00	
Hartshorn "	10.00	14.00	10	100.00	
Soft hartshorn "	2,500.00	3,000.00	1 1/2	3,750.00	

149: Reinach--326 G-3 (no date) 1901 AM1 Indochina Laotians AM8

439 435

Total exports from Upper Laos during 1898 (continued)

Name of article	Average purchase price in country, in piculs	Average sale price in near-by countries	Number of piculs or units exported	Value of purchases made in country	Observations
Anteater scales (piculs)	32.50	45.00	58	1,885.00	
Tobacco "	8.00	12.00	150	1,200.00	
Animal remains "	8.00	11.00	700	5,600.00	
Miscellaneous (pottery and forest products)				8,500.00	
				87,160.00	
		B. From the other commissionerships			
Approximate total			3,000 piculs	50,000$00	
		C. Miscellaneous animals			
Steers	7.00	12.00	300 head	2,100$00	Epizootic disease halted this trade.
Buffalo	10.00	20.00	700 "	7,000.00	
			1,000 head		
Upper Laos ..... Grand Total			7,553 1/2 piculs	146,260$00	

439 178 [437] The conclusion to be drawn from the preceding tables is not favorable toward orienting Laotian trade towards the ports of French Indo-China. It is evident that the export trend of animals and products shows a marked tendency to move towards Oubone and Siam. Indeed, Siam's share of total exports from Lower Laos (merchandise and animals), which was 179,627 francs in 1898, rose to 381,185 francs in 1899. This was an increase of more than double.

On the other hand, we see that the share of Annam, Cochinchina, and Cambodia in this same traffic, which was 699,712 francs in 1898, fell to 466,477 francs in 1899, representing an approximate decrease of one-third.

[496] The causes of this persistent and increasing orientation of Laotian trade towards Siam are perhaps to be sought in the opening of the railroad from Bangkok to Korat (1) as well as in the customs system of

(1) The king of Siam inaugurated this line on December 21, 1900.

French Indo-China.

439 497 505 There is no question but that the railroad constitutes a considerable improvement over the old means of transport, as much by virtue of the lower costs and shorter travel time as by the suppression of the dangers and bothers of the cart road from Korat to Bangkok (domestic duties, exactions of the local authorities, robberies, etc.). But are these reasons sufficient to explain or justify the admitted fact?

The River Merchant Fleet [Messageries fluviales] service is, as we have previously noted, the most rapid and least expensive means of transporting merchandise from Luang-Prabang to Saigon. Why then is this service, which is superior even in its present imperfection, scorned by exporters in general and used mainly by importers for products destined for the Europeans in Laos? The answer is a simple one. Exporters would not hesitate to use the Mekong route and to transport their products to Pnom-Penh or to Saigon-Cholon if, as they can do at Moulmein, at Xieng-Mai, at Nong-Khay, at Bassac, at Oubone, at Korat and at Bangkok, they could obtain [438] supplies there of imported merchandise from various sources to make up the counterpart of their exports. But, besides the fact that they would not be able to find certain special merchandise which is indispensable to them in the French marketplaces, they could not obtain the rest except at an increase of fifty or sixty percent or even more over the ordinary prices in the markets of Siam and Burma which we have just cited.

439 The experiment has been made, moreover, and we ask the reader's permission to give an account of it here.

"The business houses of Saigon (1), of Pnom-Penh and of Hué,

(1) Report of the Superior Commandant of Lower Laos (1897).

which do not enjoy the eighty percent exemption, cannot compete against imports by Siam.

"From another viewpoint, there is as yet no business house in Laos which can directly import all the articles necessary to it and which, in consequence, can claim the benefits of this exemption.

"The result is that the merchants and small middlemen through whose hands all export trade passes in Laos are unable to find most of the current merchandise which they need either at Pnom-Penh, at Saigon, at Vinh, at Hué or at Tourane. In addition, since that which they can find sells at extremely high prices because of the customs duties, it is to their every advantage to go to Bangkok, Khorat, Oubone, Nong-Khay or Outaradit to obtain their supplies on favorable terms, and to transport them by the long, costly and perilous land route even though that of the Mekong is rapid, sure and inexpensive!"

Thus thirty-five merchants of Vien-Tiane who had formed an association for the purpose of trade placed one of their members named Pho-Mouk, in January 1897, in charge of a convoy of natural products including eighteen large rafts of bamboo. The value of the cargo at local prices was about 38,000 francs, and represented at least twice this sum on the coast.

The convoy reached Saigon and the merchandise was sold at a considerable profit, but after having spent a month in Saigon the leader of the convoy had to go back up to Vien-Tiane, importing only the following merchandise (destined mainly for Europeans):

[439] 100 boxes of soap, 50 drums of petroleum, 20 kegs of nails, 2 cases of paper, 1 case of crockery, 50 barrels of steel, 12 cases of absinthe, 10 cases of Amer Picon [Translator's note. A brand of bitters.], 12 cases of various kinds of syrup, 12 cases of cognac, 10 cases of vermouth, 8 cases of matches, 3 cases of glassware and 2 strongboxes.

As for other import goods, our Laotians could not obtain any either in Saigon or Pnom-Penh, either because they were not to be had or else because the price was excessive. They were therefore forced to go to Bangkok to complete their return cargo and to pay the Siamese customs exit duties upon leaving (3 percent ad valorem),

439 the interior "Likin" duties and, in a word, higher transport costs than along the Mekong.

Here again it will be seen that the obstacle arises out of the customs duties which are levied on products entering Indo-China which our industries do not manufacture. These inexpensive objects, mostly trash (1), can be obtained only in Bangkok, where they sell

(1) The greater part of these articles bear the mark Made in Germany.

at a low price because only a 3 percent ad valorem entrance duty is levied on them. This fact explains why they are flooding Siam and Laos. It is to be hoped that the general government of Indo-China will remedy this state of affairs, if it has the least concern for preventing French Laos from being a colony of exploitation by foreigners, both Europeans and Orientals, without any hope of profit or material improvement for our nationals.

To sum up, the measures which should be taken in the interest of trade include the establishment of trading posts or factories; the creation of regional markets and the publication of daily price lists; an ad valorem exemption not exceeding three percent for foreign merchandise in transit for Laos; and the establishment of a single three percent ad valorem exit duty for Laotian products.

5. IMPORTS

The official information which we possess on import trade in Laos is highly incomplete.

[440] Imports of merchandise into Lower Laos are estimated at about 300 tons annually, as a maximum (1).

(1) Information on imports into Upper Laos is lacking.

The official statistics show that imports into Lower Laos rose to 92,017.65 francs in 1899.

They were distributed as follows:

Imports to Attopeu.....	4,916.50 francs
" " Cammon.....	15,273.25
" " Song-Khone....	24,449.50
" via Khone.....	47,378.40
	92,017.65

439 These imports chiefly involve the following goods: spun cotton, spun silk, native cotton goods, printed sampots, absinthe, salt, copper pots, etc.

One should also remember the imports by way of the River Merchant Fleet [Messageries fluviales] which are destined for the administration or for Europeans, and which amount to 9,233 cases of goods weighing about 300 tons.

In addition to the foregoing, salt is imported into southern Laos by the Cochinchina excise office at three depots, Stung-Treng, Khong and Ban-Mouang. Between October 1898 and February 1899, 120 tons of salt were sold to the inhabitants at a price lower than that which they ordinarily paid.

If we compare the figure for imports with that for exports, we note that in 1899 imports amounted to 92,017 francs as against exports of 847,662 francs, or a figure nearly ten times greater.

This discrepancy is even greater than is indicated, for the total value of exports is reckoned on the average purchase price in the country of origin, and should surely be doubled to obtain the average sale price on the nearby markets of Siam, Cambodia and Cochinchina. This difference between imports and exports results from the fact that the greater part of the imported merchandise does not enter Laos by [441] French routes, but comes in through the back door by way of Bassac, Oubone, Lakhone, Nong-Khay, Paklay, Xieng-Khong, Luang-Prabang, etc.

To sum up, we cannot with any certainty give any figure for overall trade in all of Laos. If, however, we take as a basis the averages obtained in various provinces, it may be presumed that this trade represents somewhat more than two million francs, to wit:

Exports.....1,244,989 francs (1)

(1) A figure obtained by adding the total exports of Upper and Lower Laos for 1898, according to the above tables.

Imports (3/4 of exports)... 933,741 francs
2,178,730 francs

439 489 6. MEANS OF TRANSPORT USED. COMPARISON BETWEEN TRANSPORT COSTS ON VARIOUS TRADE ROUTES FROM LAOS TO THE SEA.

439
489

A) Means of transport used

1. BY LAND. The means of transport used on land routes include men, elephants, horses, mules, oxen and oxcarts.

482 Men. A man serving as a bearer may carry his burden in three different ways, depending on the race to which he belongs and the route he must follow, whether over plains or mountains.

a) On the back. This manner of carrying burdens is used by all mountainfolk in general, Thais, Khas and others. Women and children as well as men carry burdens which are naturally in proportion to their strength. In transports, the average load for one bearer is thirty kilograms.

b) With a bamboo pole, the load being distributed at both ends. Two baskets, two packs or two cases are fastened to the extremities of a light, fairly thick bamboo pole which is about 1.5 meters long. The bearer places the middle of the pole on his shoulder and balances the load with his hand. The weight of the load thus carried will vary between 24 and 30 kilograms. This way of carrying loads is used by the [442] Burmese, the Lus, the Youns, the northern Laotians and some Khas.

c) With a bamboo pole, the load being suspended in the middle. This method of transport requires two men, one at each end of a bamboo pole about two meters long. It is difficult by this means to carry a load greater than 15 to 20 kilograms per man, or 30 to 40 kilograms per pole. This method of transport is used in the plains regions by the Laotians, Thais and other inhabitants of valleys and plateaus. A bearer can cover an average distance of 25 kilometers per day in level country, and from 15 to 20 in mountainous regions.

Carrying loads on one's head, which meets with such favor in Africa, is not a method used in Laos.

492 Elephants. Depending on its age, size and energy, an elephant can carry loads varying between 100 and 190 kilograms. But it is a delicate animal and requires great care and rather frequent rest periods.

On the other hand, it can go anywhere, even in spots where horses and even men would be halted. The elephant's step is regular on uneven terrain as well as in flat regions. The average distance covered in a day is from 18 to 25 kilometers, depending on the nature of the terrain and the temperature.

489 [447] Current transport costs are generally as follows:

Land Routes	francs
435 By human bearer, per hundred kilograms and per day:	1.90 to 2
439 By elephant, " " " " " "	1.60 to 1.80
By pack-horse, " " " " " "	1.90 to 2
By pack-ox, " " " " " "	0.70 to 0.80

By referring to what has been said above, we may deduce, for each of these methods of transport, the following average cost per ton or per kilometer:

By human bearer: 0.76 to 0.80 francs
By elephant: 1.07 to 1.20 "
By pack-horse: 0.76 to 0.80 "
By pack-ox: 0.70 to 0.80 "

Boatmen. Boatmen may be hired by the day or by contract for a given journey. The current prices are 0.375 franc per man per day without rice, and 0.30 franc with food.

Coolie bearers. Coolie bearers are generally paid 0.25 franc per man and per day without food, or 0.20 franc with rice.

Chief coolies and chief pirogue boatmen. The chief coolies and chief pirogue boatmen, pilots, etc. are always paid higher than their men. The amount of increase will vary, depending on conditions, by fifty to a hundred percent.

Pirogue rental. Renting a pirogue usually costs the same price per day as hiring a boatman. Thus the cost of renting a pirogue and hiring four boatmen is reckoned on the basis of five units.

B) Comparative transport costs on various trade routes from Laos to the sea.

We have thought that it might be of interest to sum up, in the comparative table given below, the courses and costs per ton and per kilometer of transports on ten of the principal trade routes of Laos.

149: Reinach--338 G-3 (no date) 1901 AM1 Indochina Laotians AM8

489
435
439

[448] COMPARATIVE TABLE OF TRANSPORT COSTS ON VARIOUS TRADE ROUTES FROM LAOS TO COCHINCHINA, ANNAM, TONKIN AND SIAM (AND VICE VERSA)

Courses	Means of transport	Distance in kilometers	Number of days		Price in francs		Observations
			upstream	downstream	Total per metric ton of 1000 kilograms	Per ton and per kilometer (ton-kilometer)	
I. Luang-Prabang to Saigon	By River Merchant Fleet. Steamships and pirogues	2300	50-60	30-35	162.50	0.0705	The average rate for cotton goods is taken as a basis.
II. Nong-Khay to Saigon	Same	1840	27-35	18-22	122.25	0.0664	Same.
III. Nong-Khay to Bangkok by way of Korat	Oxcarts	603	34-34 to 36		260 to 300	0.414 to 0.497	On this route prices vary from one year to the next, depending on the abundance of draft oxen, which are often decimated by epizootic disease.

149: Reinach--339 G-3 (no date) 1901 AM1 Indochina Laotians AM8

189 435 439

COMPARATIVE TABLE OF TRANSPORT COSTS ON VARIOUS TRADE ROUTES FROM LAOS TO COCHINCHINA, ANNAM, TONKIN AND SIAM (AND VICE VERSA) [continued]

III. (continued)							In case of a rise, the prices given here should be increased by about 15 percent.
IV. Luang-Prabang to Nong-Khay	1. By River Merchant Fleet. Pirogues and rafts.	460	15 - 25	10 - 12	40	0.0861	The average rate for cotton goods is taken as a basis. Usual prices, whatever the merchandise.
	2. By free rafts. Upstream by pirogue.		18 - 25	9 -12	250	0.543	
V. Nong-Khay to Pak-Hin-Boun	1. By River Merchant Fleet. Steamships.	335	2	1-1/2	22.50	0.0673	Average rate for cotton goods taken as basis. Usual prices, for all merchandise.
	2. By rafts and free pirogues.		8-14	4-5	100	0.298	

489
435
439

COMPARATIVE TABLE OF TRANSPORT COSTS ON VARIOUS TRADE ROUTES FROM LAOS TO COCHINCHINA, ANNAM, TONKIN AND SIAM (AND VICE VERSA) [continued]

VI. Pak-Hin-Boun to Haiphong via Ben-Thuy (Annam	By pirogue, elephant, sampan and steamships belonging to the Correspondances fluviales du Tonkin.	570	15-17	15-16	130 to 150	0.228 to 0.263	By pirogue from Pak-Hin-Boun to Keng-Kiet. By elephant from Keng-Kiet to Hatrai (Annam). By sampan from Hatrai to Ben-Thuy. By steamship from Ben Thuy to Haiphong.

149: Reinach--340 G-8 (no date) 1901 AMI Indochina Laotians AM8

149: Reinach--341 G-3 (no date) 1901 AM1 Indochina
Laotian AM8

[A466] COMPARATIVE TABLE OF TRANSPORT COSTS BY VARIOUS TYPES RATES PERTAINING TO COMMERCIAL ARMY, VEHICLES AND ITEM (SEE FIRST VERSION) (CONTINUED)

Sections	Means of Transport	Distance in kilometers	Number of days: Up-stream	Number of days: Down-stream	Price in Tical-Cost article ton of 1000 kilograms	Prices per ton and per kilometer (ton-kilometer)	Observations
VII. Luang-Prabang to Saigon via Bangkok and Pnom-Penh (Mixed).	1. By River Ferrying Piroguas and steamships. By elephant, Piroguas and camels. By steamships belonging to the Messageries fluviales de Cochinchine.	1115	35-40	20-21	192.50 to 218.50	0.173 to 0.196	By piroguas, rafts and steamships of the River Services Fleet from Luang-Prabang to Nam-Pnom. The rest as above.
	2. By rafts or free piroguas. By elephant and camels. By steamships belonging to the Messageries fluviales de Cochinchine.	1115	45-60	25-35	100 to 300	0.13 to 0.269	By rafts and free piroguas from Luang-Prabang to Nam-Pnom. As above for the rest of the journey.
	1st section. Luang-Prabang to Paksay	1. Piroguas, half-loaded going upstream. 2. Rafts going downstream.	230	35-37	4-7	30 / 10	0.130 / 0.078	After all these sections, the total price per ton and per kilometer adds 1,000 kilometers.
	2nd section. Paksay to Nakhon (Oubonnakh)	2. By elephant, horse and on it both directions. 2. By human beings, in both directions	220	7-9 / 20-22	10 / 15	280	0.818	
VII. Luang-Prabang to Bangkok.	3rd section. Nakh to Bangkok (Mixed).	1. Piroguas, fully loaded, towed by steamships going upstream (August to October inclusive).	1090	33-34	4	54.16	0.50	
		2. Piroguas, half-loaded going upstream (November to February).	600	20-21	—	96	0.160	
		3. Piroguas, fully loaded going downstream.		—	3	30	0.0278	
			2090	Average		Upstream: 364.16 Downstream: 240	0.349 / 0.214	Towards Luang-Prabang Towards Bangkok

(Table continued over)

149: Reinach--342 G-3 (no date) 1901 AM1 Indochina
Laotiam AM8

489
435
439

II. Passes to Bangkok via Oubone and Korat.	1. Steamship from Bangkok to Pekin. 2. Carts from Pekin to Oubone. 3. Pirogues from Oubone to Passes.	750	36	36	26.65 245 19	290.65	0.388	
I. Passes to Saigon.	Pirogue and steamship.	1110	14	30	57.20	0.0515		

439 489 435 [450] A mere glance at the table is enough to show the enormous difference between transport costs towards Siam, and those towards Annam, Tonkin and Cochinchina. And even so, we have not reckoned with the various interior local taxes which shippers have to pay on the roads of Siam, nor evaluated the worries and bothers to which they are subject or the robberies which they must fear.

[Illustration here]

We have already expressed the opinion that if these routes continue to win favor with merchants, this is because they end at points and at markets where the latter can be sure not only of marketing their products, but also of finding at low prices all the merchandise, no matter what its source, which is necessary to the inhabitants of Laos.

Let our markets in Cochinchina, Cambodia, Annam and Tonkin be supplied in the same way and offer the merchants of Laos the same advantages in the way of reduced prices; let trading posts or factories be established on the Mekong at Stung-Treng, [451] Bassac, Lakhone, Hin-Boun, Vien-Tiane, Pak-Lay and Luang-Prabang, and the roads leading to Siam will rapidly be forsaken for our own. Indeed, all the merchants know that security now reigns in Laos. One pays what is due only once, the distances are shorter, and transport costs are lower than those paid from the Mekong to Siam.

7. CUSTOMS SYSTEM TO BE ADOPTED

439 65 The valley of the Mekong, of which we occupy one side, remains open in fact whereas the coasts of Indo-China are closed by the customs. If we were to close this valley as well by a customs barrier we should then have contracted enormous expenditures without any hope of compensating receipts.* From still another point of view, is it not to be feared that the present state of things will bring about the following result? Today, foreign merchandise is halted on our coasts by customs duties. Since such merchandise is, moreover, indispensable to our nationals, there can be no doubt but that it is coming into our possessions by a back door, despite the long distances, the high costs and the difficulties of all kinds which the roads from Siam to the Mekong offer. After flooding this basin first, it will penetrate into Cambodia, Annam and Tonkin without any profit either for the Treasury or for our nationals.

We speak in the future tense, but who can deny that we might

439 use the present tense (1)?

651 (1) The fact is actually occurring at the present time, and has motivated the canceling of the eighty percent exemption. (See p.430, note.)

The discrepancy between the officially recognized exports and imports is a sure indication that we are here approaching the truth.

The remedy for this state of things is to make Laos freely open, on equal terms and both entering and leaving, to all goods and to all merchants. It means reducing all the duties levied to the single three percent ad valorem rate both entering and leaving. It means, in a word, parity [452] with our neighbor Siam which, after having left us the land, the water and the wild beasts of the forest, will continue, unless we take care, to be the only one to profit from our colony of Laos.

It will be objected that the remedy which we recommend would not prevent the Treasury from being cheated, since foreign goods introduced into Laos might still, as is the case at present, come in through a back door into the other parts of the Indo-Chinese union. But we reply that the situation is not at all the same. The Mekong is open over more than 2000 kilometers, and there the frontier is entirely a moral one, whereas between Laos and the other lands of Indo-China there are mountainous obstacles with only a few passages, and it would be enough merely to guard these, with respect to customs, in order to prevent fraud.

[453] [Illustration at top of page]

CHAPTER IX

INDUSTRY. ARTS AND TRADES.

433 The only purpose of industry and trades in Laos is to satisfy local
472 needs. Indeed, one cannot regard as export trade the sale of a few silk or cotton goods of Laotian origin in the nearby regions.

463 Mention must first be made of what we may call the products of family industry. With a very few exceptions, there are no specialized workers pursuing a given trade, as regards the construction of houses and the manufacture of various useful articles, hunting and fishing devices, as well as in spinning, dyeing and weaving cloth and, in a

326 bracelets, necklaces, rings, long neck chains and chignon chains,
306 hairpins, buckles, buttons, earrings, etc., either of gold or of silver.
The purity of the metals used in this work varies widely, and is usually left to the choice of the person who commissions the work. In some cases gold is left free of any alloy, while often a fourth part of silver is used and sometimes even more.

Silver taken from coins is left as pure as it was originally, or else its purity is decreased by alloying it with copper and tin.

The precious stones used in jewelry include sapphires, rubies, quartz, crystal, onyx, glass and even basalts. Cutting facets on gems is unknown in Laos, and only cabochon cutting, which may be more or less regular, is practiced.

326 Ironmongery. The blacksmiths of Laos are quite skillful. Their extremely scant equipment includes a double-action bellows, one or two pairs of tongs, two or three hammers, a hot set and a small anvil. They use only wood charcoal.

By taking plenty of time they are nevertheless able, using bars of soft iron imported from Europe, deadheads, and "Duongs" which come from the high primitive furnaces [457] of the Kouï region, to forge various tools and utensils such as machetes, swords, knives, scissors, spades, bits, elephant halters, camac hooks, etc.

Each blacksmith has his own specialty. With the help of routinism and by virtue of constant repetition of the same forms, these artisans manage to acquire a real skill and to utilize every last scrap of iron. It should also be noted that iron is very expensive. It costs from 30 to 70 francs per hundred kilograms in Laos, and sometimes as much as 90 or even 110 francs.

A certain number of articles, such as plowshares, spade irons, axes, etc. are imported from China and Siam.

323 Pottery. The pottery industry is very active, and in spite
415 of the many imported pots made of wrought, enamel or cast iron or copper, the industry still makes a large number of pots and vases of every size and shape which are destined for various uses.

The potters of Laos produce glazed jars which serve as receptacles for alcohol and water, water coolers, flower vases, drinking mugs, oil lamps, cuspidors, smooth and rough mortars, tiles, brick, drains, ornamental medillions, etc. The products of this industry are mainly [439] destined for local consumption. Some of them, however, also find markets in nearby countries.

396 is also cut out with a hatchet so as to decrease the thickness of the walls and render them more elastic.

When the pirogue is as wide as is desired, or else as wide as the wood being used will allow without any danger of splitting or bursting, strong rectangular crossbraces are set at regular intervals and tailed into the sides of the pirogues a few centimeters below the gunwales. When it has reached this state the pirogue is virtually finished. It has its final shape, and looks like the elongated half of a fish which has been split lengthwise.

All that remains is to finish the work by giving the bottom and sides the requisite thickness, by polishing the wood, smoothing the curves, etc.

Finally comes the moment of launching. It must be said, to the honor of the builders' sure eye and skill, that it is always successful and that once put into water the pirogue behaves well in its element, with a light and graceful balance.

396 The price of pirogues varies depending on their dimensions and [466] the region, and can therefore not be fixed in any absolute • 439 fashion. A new pirogue, in fact, costs from 50 to 300 francs. In 435 Cambodia a pirogue from Laos costs twice what it cost in its land of origin. Thus it may readily be imagined that pirogues are exported from Lower Laos in fairly large numbers. The statistics for 1899 show exports of 552 pirogues of various dimensions, with a [Illustration here] total value of 55,195 francs, or an average purchase price of 100 francs apiece.

398 Cartwrights. The construction of carts, wagons, pack-saddles for oxen and elephant palanquins is a specialized industry only on the right bank and in Siam. In French Laos carts are little used because of the nature of the terrain, and there are no cartwrights. Pack-saddles for oxen and elephant palanquins are made by nearly everyone, particularly by drovers and carnacs.

317 Lime. Lime is made in Laos, primarily for inclusion in betel masticatories.

276 [467] The kilns are dug in the clay on banks of watercourses, near calcareous masses from which limestone is taken.

272 Alcohol. The distillation of grain--rice, maize and hemp-seed--is not an industry in the strict sense, for every village and every family makes alcohol on occasion.

316 begun at judiciously chosen points [Illustration here] they can be accommodated to the existing means of communication and transport
313 if necessary. As for the sums needed to engage in a commercial,
185 mining or forest enterprise, it is difficult to determine these in any precise fashion for, depending on the region and the special conditions of the terrain, such matters may require more or less capital.

[518] For dealing in teak wood (1), for example, the sums needed for purchase and transport would depend on the quantity which it was desired to export. As an average indication, the sum of 40,000 francs might be given for operations on 1,000 teak trees.

From the point of view of mineral resources, certain deposits require capital in the millions for their exploitation, while others might be worked profitably with sums varying between 250,000 to 500,000 francs.

433 In the way of industries which may be started at the present time,
185 we may cite only the establishment of rice distilleries in southern Laos and of a mechanical sawmill at Khone.

[273] A distillery could be set up without any great expense at the
[243] mouth of the Mekong and the Sedone, for example. Thanks to the price of glutinous rice which is five or six times less expensive in this region than at Pnom-Penh, the alcohol from such a distillery would find a certain market in Cambodia.

185 For several years now there has been talk of establishing a
313 mechanical sawmill on the island of Khone which would obtain its motive power from the nearby waterfalls. Besides teak wood (2),
439

(1) A rigorous investigation made by a chief guardsman of the Laotian militia of the region of Xieng-Khong, on the left bank of the Mekong, has shown that the number of teak trees ready for cutting in the province of Muong-Sing is 4,975 in all, 2,000 of which are of exceptional size for the region, that is to say that their diameter varies between 0.3 and 0.6 meter. Counting the young shoots and young trees, the total number of teaks which we possess in Muong-Sing may be estimated at about 20,000.

Another group is situated on the right bank of the Mekong, in the vicinity of Pak-Lay and in the basin of the Nam-Poun. It includes from 10,000 to 12,000 teak trees ready for cutting, concessions for about half of which have been granted. (Bulletin économique de l'Indo-Chine, 1900.)

(2) Teak is generally regarded, although wrongly, as the wood

313 185 439

with the greatest value on European markets, but woods which are very common in Indo-China are often just as highly esteemed. Among others we may cite the "Mai-Niang," the "Mai-Thon" (mock walnut), the "Mai-Deng" (rosewood), the "Mai-Dou" (thuja), the "Mai-Lang-Dam" (ebony), etc.

a great many other varieties of trees could be used to feed the sawmill and, like alcohol, find an easy outlet in Cambodia and Cochinchina.

185 231 [232]

[519] Finally, one other enterprise might be attempted. This is livestock breeding and particularly the raising of oxen, which sell in Cambodia and Cochinchina for double their value in their country of origin. We have previously mentioned some of the points which would be particularly well-suited to undertakings of this nature. The greatest hazard to be feared is the appearance of epizootic epidemics such as the ones which occur almost periodically and against which there is no weapon. The Pasteur Institute of Nha-Trang does not send out [illustration here] anti-plague serum as is done with cowpox vaccine, for as yet its incoulation must be left in the hands of specialists.

We believe that the system of livestock leasing would perhaps yield good results with the Laotian peasants.

241 185

Since no serious attempt has as yet been made in Laos, it is difficult to treat of agricultural enterprises which Europeans might undertake. Nor must we forget that affairs of this sort require comparatively large sums of capital and professional knowledge which takes a long time to acquire. It is, moreover, up to the administration to provide the initial impetus, for it has the necessary means, equipment and personnel. When plantations have succeeded it [520] will easily find colonists to continue the work which has been begun, and capital will then find its way into Laos.

000

Speaking for ourselves, we are persuaded that this land will soon be open to colonization. Only the coast of Indo-China is well-known, and on the day when it has been demonstrated that the mountains as well are a source of wealth, the fortune of Laos will be made. There is a blank page on which it is up to us, by profiting from the gropings and errors of the past, to trace the principles of true colonization, which provides well-being for the population and creates outlets for our industry and our commerce.

A very high official of Laos recently wrote, speaking of the development of this land: "Once everything was for Tonkin and

Kha

563 in a few particulars. They all inhabit the peaks of mountains, where they generally engage in the cultivation of poppies and maize.

[439 241] Hos. The Hos are genuine Chinese who came in with the caravans from Yunnan and settled in the land to engage in trade or to grow cotton (1).

(1) According to a monograph by Government Commissioner Grand.

[105]

APPENDIX XVIII

NOTE ON THE EASTERN REGION OF LOWER LAOS (1)

[113] (1) Extract from a report by Colonel Tournier, Superior Commandant of Lower Laos. (Bulletin Economique de l'Indo-Chine, 1900, No. 19.)

PRESENT STATUS OF THE DIFFERENT KHA TRIBES

563 TRIBES LIVING ON THE GREAT ANNAMITIC CHAIN. 1. The tribe of Tha-Hoi may be regarded as being entirely pacified. It is a dependency of both Annam and Laos, but the spheres of influence of the two lands were perfectly delimited at the time of the establishment by Annam of the administrative post in Lao-Bao.

2. The Khon-Tou-Khas, the Ve-Khas and the Alak Khas are completely pacified and extremely tranquil. They are dependencies of Saravane.

Between the high valleys of the Se-Kemane and the Sesane (where the word Legnau, which is unknown in the region, is found on the Pavie map), there is an absolutely deserted region which serves as a buffer between the abovementioned tribes and the Cedangs.

[316] 563 567 3.The great tribe of the Cedangs, so far unconquerable. It occupies both sides of the chain, and its villages are situated in extremely difficult positions. The land is very poor, and until the last few years, besides the iron deposits which they work, their real commerce was the slave trade. All the Annamite slaves of the Mekong valley, both on the left bank and the right, came from raids made by these tribes in Annamite territory, even down as far as the sea. The abolition of slavery in Laos was a great blow to them, but since it is absolutely necessary for them to procure buffalo and oxen in order to live and especially for their superstitious practices, they still continue to make occasional captures in Annam and find a market for

316 Pou-Khao-Tong.

The gold is found in fine gravel including miscellaneous rock debris which has been covered by the recent alluvia of the water-courses, at a depth varying from a few decimeters to a meter and a half.

In 1899, as samples resulting from trial prospecting, we provided the local organizing committee for the Exposition of 1900 with gold, with black schlichs, with untreated gold-bearing gravel and with superposed sterile alluvia.

The fifteen and a half grams (15-1/2 grams) of gold in the form of grains and dust which was supplied represented the supervised production of a single gold-washer, in visible gold, for thirty days work at the rate of 20 wash-troughs per day which weighed 3.5 kilograms each on the average.

The gold content of the black schlichs which resulted from the washing and which we collected can be determined only by analysis (1)

(1) They were sent for analysis to the Saigon laboratory, but the results have not yet been published.

On the average, a ton of treated gravel represented a weight of about 300 grams of black schlichs, and a volume of 118 cubic centimeters.

Thus, with the rudimentary methods used in this prospecting operation, without amalgamation and despite the inevitable losses, the fifteen and a half grams of gold collected, using local procedures and labor, cost 30 francs, or 1.935 francs per gram and 1,935 francs per kilogram (2).

• [439 435]

(2) Here, by way of comparison, are the cost prices of gold at several points of the globe:

Saint-Elie (French Guiana), 1619 francs
Siberia 2170 francs
California, 1500 to 1700 francs
Australia, 1600 to 1900 francs

This, of course, by using the most advanced methods which reduce losses of the precious metal to almost nothing.

The respective densities of the schlichs, of the gold-bearing gravels and of the sterile alluvia [129] were 2.6 for the schlichs, 1.82 for the gravels and 1.49 for the sterile alluvia.

314 which range from the size of a nut to the size of a billiard ball. These specimens are not sticky, do not deteriorate very much and are far superior to the preceding ones. I believe that it was a specimen of this last category which M. de Reinach, the government commissioner in Laos, sent to Paris, where it was valued at 7 francs per kilogram.

Since this specimen was sent we have sent two others for trial and evaluation to the business house Michelin et Cie., a large rubber manufacturer in Clermont-Ferrand.

The Superior Resident in Laos informs us that the Khua-nhut-niai, the liana which produces rubber, is found in all the thick forests along the banks of the Mekong. It grows in great numbers in the forests of the Bolovenes massif and on the sides of the great chain in the provinces of Saravane, Song-Khone and Cam-Muon. M. Tournier estimates that it can reproduce easily, [134] either by seeds or by cuttings. He believes it would also be easy to induce the natives in these regions to engage in the regular exploitation of the plant whenever they found a certain and remunerative market for the product.

To sum up the above observations, we have noted that Indo-China possesses at least two plant varieties which can yield rubber of excellent quality. These two varieties are the Parameria glandulifera in Cochinchina and the south of Cambodia, and an as yet undetermined species of Apocynaceae in Annam and Laos. Both the one and the other grow in such numbers that they hold forth hope of a veritable source of wealth for the colony. Up to the present time, only the lianas of the second variety have been exploited, and I should like to call attention to those of the first variety.

439 The customs statistics for exports from Tonkin for the whole of 1898 show that France received from this country 1,545 kilograms 314 of crude rubber with a value estimated at 2,020 francs, and that other countries received 619 kilograms with a value estimated at 947 francs, making a total of 2,164 kilograms with a value of 2,967 francs (1).

[505] (1) It should be noted that the greater part of this product leaves Vinh, in Annam, by coastal vessels, and that Hai-Phong is given as the port of embarcation on the Tonkin export lists.

For the first quarter alone of the current year, we find the following exports from Tonkin: to France, 13,623 kilograms with a value

314 439 of 40,869 francs; to Hong Kong warehouses, 1,271 kilograms with an estimated value of 2,458 francs; making a total of 14,894 kilograms valued at 43,227 francs.

Thus while the customs statistics for the years previous to 1898 do not even mention the export figures for this product, we find that the 1898 figure, which is a little more than two tons, has more than sextupled in the first quarter of the following year, which is the current one.

This amount of progress gives us every right to conceive real hopes for the future.

314 654 The general government of Indo-China (Department of Agriculture and Commerce) recently sent to the business house Michelin et Cie. (Clermont-Ferrand, and 7 Rue Gounod, Paris), for the purpose of analysis and evaluation, specimens of rubber which were collected in Laos through the offices of the superior resident.

According to the report of the superior resident in Laos, these specimens were produced by a liana, the Khua-nhut-niai of the Laotians, which is quite widespread in the thick forests on the banks of the Mekong and on the Bolovenes massif, as well as on the sides of the Annamitic Chain. One of the specimens submitted for analysis (No. 1) comes from a variety of rubber which is found particularly in Saravane. The other (No. 2) is the ordinary rubber harvested by the natives, with no further processing.

[135] An expert chemist sets forth in the following terms the results of the examination to which these specimens were subjected at the rubber factory of Michelin et Cie. at Clermont-Ferrand (August 5, 1899):

"The rubber in both boxes has the outer appearance of rubber from the Dutch East Indies of the kinds known in trading circles as 'Java,' 'Penang' or 'Préanger.' Like the latter, it probably comes from plants of the Ficus family. This presumable identity of origin is confirmed, moreover, by the characteristics of the isolated gum and resin of these specimens, as well as by the nature of the bark fragments which the specimens contained.

"We purified this rubber mechanically by the usual shredding processes. The thin leaves thereby obtained were dried in a drying-cabinet at a temperature of 25°-28° C.

314
654

	No. 1 Saravane	No. 2
Weight of specimen	.608 kilog.	1.86 kilog.
Weight of purified gum	.58 kilog	1.54 kilog.
Yield of purified gum	95.38%	82.79%

Proximate analysis of the product yielded:

Moisture at 105°	1.06	1.4
Fixed ashes	1.3	1.4
Resins	3.4	9.76
Rubber	89.24	87.44

For comparison, the following is an analysis of Java rubber:

	Type 1[a]	Type 2[a]
Moisture	.75	
Ash	.8	1.3
Resins	4.48	7 to 9%
Rubber	93.97	
	100.00	

Indo-Chinese rubber, if in accordance with the specimens examined, would be likened on the market to Java type 2[a] rubber, which is graded and regulated as follows:

First quality Java rubber includes sound gums, without resinified parts (parts which have turned oily), of a fine light color, and without bark fragments.

Darker gums containing some fragments, but which are still sound on the whole are classified as second quality.

The third quality includes rubber which has been harvested with less care or in the wrong season, which has been poorly preserved, is more or less resinified and laden with foreign matter, ligneous debris, bark, sand, etc.

439
314

The following figures, taken from the daily price lists on the markets of Antwerp, Hamburg, Liverpool and London, will give some idea of the commercial value of these types of rubber.

PRICE QUOTED ON "JAVA" OR "PENANG" ON THE VARIOUS EUROPEAN MARKETS

439
314

Source	Date	Grade 1st	2nd	3rd
Hamburg	7-30-1899		6.95	
"	7-8	8.95	6.95	
"			7.55	
"	6-28		7.55	
London	6-1	8.98		
Antwerp	3-14			3.00
Amsterdam	4-10		7.59	
Antwerp	3-3			3.00
Le Havre	11-18-1898	8.40	5.85	
Hamburg	11-9	8.45	6.55	
"	11-2	8.55	5.55	
Antwerp	10-25			3.00
Hamburg	10-11	8.80	6.25	
"	9-9	8.80	6.25	
"	9-9	8.75	6.30	

(Bulletin économique de l'Indo-Chine. Report of the Director of the Indo-China Department of Agriculture and Commerce, October 1, 1899.)

II

314
654

In August 1900 the Indo-China Department of Agriculture and Commerce sent to the Colonial Office, for purposes of analysis, specimens of rubber extracted from the bark of rubber lianas by simple grinding processes using native crushers and successive washings.

These specimens were prepared under the auspices of M. Gaillard, government commissioner in Khong. The crushed bark came from the liana called Khua-nhut-nhai which is found throughout all Laos.

The Colonial Office has published the results of the analysis of the specimens sent from Khong. The analysis was carried out under the direction of Dr. Heim, head of the Laboratory of the National Office for Foreign Trade [Office national du Commerce extérieur].

The following are the results of a comparison made between the rubber which was extracted from the liana Khua-nhut-nhai [137] by coagulation of the latex, according to this report, and the rubber extracted by grinding from the dry bark.

It is of particular interest to compare the rubber extracted from

654 What is more, according to the economic report for the months of
314 February and March 1900 in Upper Laos, which has just reached the
Indo-China Department of Agriculture and Commerce, 3,250 kilo-
•439 grams of rubber were exported during this period, or, to be precise,
this was the verified figure at Vien-Tiane. The storehouses in this
center also contained a large supply which would probably go down-
435 river at the first rises of the Mekong. [139] The sale price by natives
at Vien-Tiane was said to be one piaster per kilogram.

Tran-ninh, which had not yet been able to supply any statistics, even approximate ones, indicated exports of 1,500 kilograms to Tonkin for the same period and at the same price as being the amount of export rubber which represented purchases from Vien-Tiane.

These prices, which are reasonable ones in view of the present value of money in Laos and the needs of the inhabitants, leaves the exporters sufficient profits. On the other hand, we have had occasion to note the entirely abnormal price of 5.50 francs per kilogram which rubber reached at Vinh towards the end of March 1900, a price which, when the cost of freight, transhipment and handling, insurance and losses in weight along the way is added, leaves only a small profit for the export trade.

IV

314 339,400 kilograms of rubber were exported from Indo-China
439 during 1900, as against 52,813 in 1899. Of this amount, 300,400 kilograms went out through Tonkin, and 39,000 kilograms through Saigon. The greater part of this rubber comes from Annam, and especially from Tran-Ninh (Laos).

By these figures we see how greatly the rubber trade has grown in Indo-China, and what a factor this raw material promises to be in the economic development of the colony.

The sale price in 1899 was one piaster per kilogram. Since that time it has risen appreciably in consequence of a rising demand from all quarters. In the province of Vien-Tiane the average price is two piasters per kilogram, and in the forests where the rubber is grown it costs 90 piasters per picul.

314 The rapid rise in the price of rubber has encouraged the natives to engage in excessive exploitation of the product, and without any care for the future they have destroyed large quantities of extremely productive lianas. The Laotians do not know how to collect the sap of the rubber plant and still spare the plant itself, and they thereby